

Sequence Listing

<110> Ashkenazi, Avi J.  
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Botstein, David  
Desnoyers, Luc  
Eaton, Dan L.  
Ferrara, Napoleone  
Fong, Sherman  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Kljavin, Ivar J.  
Napier, Mary A.  
Pan, James  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Stewart, Timothy A.  
Tumas, Daniel  
Watanabe, Colin K.  
Williams, P. Mickey  
Wood, William I.  
Zhang, Zemin

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<211> 251  
<212> PRT  
<213> Homo sapiens

<400> 6  
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Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys  
20 25 30  
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35 40 45  
Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe  
50 55 60  
Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn  
65 70 75  
Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala  
80 85 90  
Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn  
95 100 105

Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu  
                  110                     115                     120  
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln  
                  125                     130                     135  
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe  
                  140                     145                     150  
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile  
                  155                     160                     165  
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly  
                  170                     175                     180  
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly  
                  185                     190                     195  
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu  
                  200                     205                     210  
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro Ala  
                  215                     220                     225  
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Arg His  
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 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln  
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 <211> 1373  
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 gtccggcggt ctggcctagg gatcttcccc gttgcccctt tggggcgaaa 200  
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gaaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250  
taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300  
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taaattattt agtccttaca ctg 1373

<210> 8  
<211> 367  
<212> PRT  
<213> Homo sapiens

<400> 8  
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20 25 30  
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35 40 45  
Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys  
50 55 60  
Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr  
65 70 75  
Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu  
80 85 90  
Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln  
95 100 105  
Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala  
110 115 120  
Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys  
125 130 135  
Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile  
140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr
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Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys
				170				175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln
					185				190				195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr
				200					205				210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn
				215				220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val
				230				235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys
					245				250				255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys
				260				265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn
				275				280					285	
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr
				290				295					300	
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met
				305				310					315	
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Prc	Thr
				320				325					330	
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu
				335				340					345	
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu
				350				355					360	
Lys	Glu	Glu	Val	Ile	Asn	Lys								
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<210> 9

<211> 418

<212> DNA

<213> Homo sapiens

<400> 9

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aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150

tgcacttctc ctcttgcaaa gaccataaca tcacaggcca tttttgcaac 200

ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggccat 250

aaaaacattt aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tgggttatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350  
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400  
gaggaatatg accaggaa 418

<210> 10  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 10  
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<210> 11  
<211> 23  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctaagaacctt ccctcaggat ttt 23

<210> 12  
<211> 40  
<212> DNA  
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<400> 12  
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<210> 13  
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<212> DNA  
<213> Homo sapiens

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cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 200  
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tcctgctagg tgccatattc attgctttaa gctcaagtgc catcttacta 300  
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350  
tgtgaatgtg tgctcagaac tggtaagct agttttctgt gtgcttggt 400  
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

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<210> 14  
<211> 424  
<212> PRT  
<213> Homo sapiens

<400> 14  
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Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn  
35 40 45  
Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
50 55 60  
Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
65 70 75  
Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
80 85 90  
Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
95 100 105  
Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
110 115 120

Ala Met Ala Val Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr Ala  
 125 130 135  
 Leu Leu Phe Arg Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln  
 140 145 150  
 Trp Ala Ser Leu Leu Thr Leu Phe Leu Ser Ile Val Ala Leu Thr  
 155 160 165  
 Ala Gly Thr Lys Thr Leu Gln His Asn Leu Ala Gly Arg Gly Phe  
 170 175 180  
 His His Asp Ala Phe Phe Ser Pro Ser Asn Ser Cys Leu Leu Phe  
 185 190 195  
 Arg Ser Glu Cys Pro Arg Lys Asp Asn Cys Thr Ala Lys Glu Trp  
 200 205 210  
 Thr Phe Pro Glu Ala Lys Trp Asn Thr Thr Ala Arg Val Phe Ser  
 215 220 225  
 His Ile Arg Leu Gly Met Gly His Val Leu Ile Ile Val Gln Cys  
 230 235 240  
 Phe Ile Ser Ser Met Ala Asn Ile Tyr Asn Glu Lys Ile Leu Lys  
 245 250 255  
 Glu Gly Asn Gln Leu Thr Glu Ser Ile Phe Ile Gln Asn Ser Lys  
 260 265 270  
 Leu Tyr Phe Phe Gly Ile Leu Phe Asn Gly Leu Thr Leu Gly Leu  
 275 280 285  
 Gln Arg Ser Asn Arg Asp Gln Ile Lys Asn Cys Gly Phe Phe Tyr  
 290 295 300  
 Gly His Ser Ala Phe Ser Val Ala Leu Ile Phe Val Thr Ala Phe  
 305 310 315  
 Gln Gly Leu Ser Val Ala Phe Ile Leu Lys Phe Leu Asp Asn Met  
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 Phe His Val Leu Met Ala Gln Val Thr Thr Val Ile Ile Thr Thr  
 335 340 345  
 Val Ser Val Leu Val Phe Asp Phe Arg Pro Ser Leu Glu Phe Phe  
 350 355 360  
 Leu Glu Ala Pro Ser Val Leu Leu Ser Ile Phe Ile Tyr Asn Ala  
 365 370 375  
 Ser Lys Pro Gln Val Pro Glu Tyr Ala Pro Arg Gln Glu Arg Ile  
 380 385 390  
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 Glu Asp Thr Phe

<210> 15  
<211> 755  
<212> DNA  
<213> Homo sapiens

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cagccatggc tgttatcttc tcaaatttta gcattataac aacagcttt 650  
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700  
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cttta 755

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt cttccagga 20

<210> 18  
<211> 40  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

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<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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cgcgcggccg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100

gcggcctgcg gggcagagga gcatcccgtc taccagggtcc caagcggcgt 150

ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200

ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250

tgaagaaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300

ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgcct 350

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agctgccttc ttactaccct ggtccatgtct gcctgtatgtc attgacgact 1400  
tccatctgaa gcagccccac ttccatggaa ccgagccat cttcttctcc 1450  
ttctatgtct tcttcaccaa gtttgccctt ggagtgtcac tgggcatttc 1500  
taccctcagt ctggactttg cagggtacca gaccctgtgc tgctcgac 1550  
cggaacgtgt caagtttaca ctgaacatgc tcgtgaccat ggctccata 1600  
gttctcatcc tgctggccct gctgctttc aaaatgtacc ccattgatga 1650  
ggagaggcgg cgccagaata agaaggccct gcagggactg agggacgagg 1700  
ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750  
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ggatcagga cctgtctgcc ggcttgctga gcagctggac tgcaggtgct 1850  
aggaagggaa ctgaagactc aaggaggtgg cccaggacac ttgctgtgct 1900  
caactgtgggg ccggctgctc tgtggccctc tgcctccct ctgcctgcct 1950  
gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000  
ggcctagccc ggaacactaa tgtagaaacc tttttttac agagccta 2050  
taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100  
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<210> 20

<211> 458

<212> PRT

<213> Homo sapiens

<400> 20

Met	Trp	Leu	Arg	Trp	Ala	Leu	Ser	Leu	Pro	Pro	Ser	Ser	Cys	Leu
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Trp	Ala	Glu	Pro	Gly	Met	Pro	Ser	Gln	Thr	Pro	Trp	Trp	Ala	Ser
		20							25				30	
Ala	Ser	Ala	Asn	Pro	Pro	Gly	Pro	Ala	Trp	Val	Ala	Leu	Cys	Pro
			35						40				45	
Gly	Ser	Ser	Ser	Pro	Arg	Pro	Trp	Pro	Ser	Leu	Pro	Thr	Ser	Ser
			50						55				60	
Ser	Gly	Ser	Cys	Pro	Thr	Ser	His	Thr	Ala	Arg	Pro	Ile	Gly	Thr
			65					70					75	
Cys	Phe	Ser	Ile	Ala	Ser	Leu	Lys	Gln	Trp	Ser	Arg	Val	Ser	Met
			80						85				90	
Phe	Pro	Thr	Arg	Leu	Ser	Pro	Cys	Ser	Ser	Ala	Thr	Glu	Gln	Thr
			95						100				105	

Glu Arg Asp Ser Ala Thr Ala Tyr Arg Met Thr Val Glu Val Leu  
 110 115 120  
 Gly Thr Val Leu Gly Thr Ala Ile Gln Gly Gln Ile Val Gly Gln  
 125 130 135  
 Ala Asp Thr Pro Cys Phe Gln Asp Phe Asn Ser Ser Thr Val Ala  
 140 145 150  
 Ser Gln Ser Ala Asn His Thr His Gly Thr Thr Ser His Arg Glu  
 155 160 165  
 Thr Gln Lys Ala Tyr Leu Leu Ala Ala Gly Val Ile Val Cys Ile  
 170 175 180  
 Tyr Ile Ile Cys Ala Val Ile Leu Ile Leu Gly Val Arg Glu Gln  
 185 190 195  
 Arg Glu Pro Tyr Glu Ala Gln Gln Ser Glu Pro Ile Ala Tyr Phe  
 200 205 210  
 Arg Gly Leu Arg Leu Val Met Ser His Gly Pro Tyr Ile Lys Leu  
 215 220 225  
 Ile Thr Gly Phe Leu Phe Thr Ser Leu Ala Phe Met Leu Val Glu  
 230 235 240  
 Gly Asn Phe Val Leu Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn  
 245 250 255  
 Glu Phe Gln Asn Leu Leu Leu Ala Ile Met Leu Ser Ala Thr Leu  
 260 265 270  
 Thr Ile Pro Ile Trp Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys  
 275 280 285  
 Thr Ala Val Tyr Val Gly Ile Ser Ser Ala Val Pro Phe Leu Ile  
 290 295 300  
 Leu Val Ala Leu Met Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val  
 305 310 315  
 Ala Val Ala Ala Gly Ile Ser Val Ala Ala Ala Phe Leu Leu Pro  
 320 325 330  
 Trp Ser Met Leu Pro Asp Val Ile Asp Asp Phe His Leu Lys Gln  
 335 340 345  
 Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val  
 350 355 360  
 Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr  
 365 370 375  
 Leu Ser Leu Asp Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln  
 380 385 390  
 Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala  
 395 400 405  
 Pro Ile Val Leu Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr  
 410 415 420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln  
425 430 435  
Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp  
440 445 450  
Ser Thr Glu Leu Ala Ser Ile Leu  
455

<210> 21  
<211> 571  
<212> DNA  
<213> Homo sapiens

<400> 21  
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50  
tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100  
accctatgaa gcccagcagt ctgagccaat cgccctacttc cggggcctac 150  
ggctggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200  
ttcacctcct tggctttcat gctggtgag gggactttg tcttgtttg 250  
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctctggcca 300  
tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350  
cggttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450  
cggttagctgt ggcagctggc atcagtgtgg cagctgcctt cttactaccc 500  
tggtccatgc tgcctgatgt cattgacgac ttccatctga agcagcccc 550  
cttccatgga accgagcccc a 571

<210> 22  
<211> 1173  
<212> DNA  
<213> Homo sapiens

<400> 22  
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aaagggtgcag gtatgagcag gtctgaagac taacattttgc tgaagttgt 100  
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagttc 150  
cttccttcag cccttgtaat ttggacatct gctgcttca tattttcata 200  
cattactgca gtaacactcc accatataga cccggcttta ccttataatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgcgg cagtttatg cattgctacc atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400  
ctggccttgt acttggaaaat ctgagttgtt taggactttc tattgtggca 450

aacttccaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500  
taccttttgt atgggctcat tatatatgtt tgttcagacc atccttcct 550  
accaaatgca goccaaaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggta tctgggtgg agtaagtgca cttagcatgc tgacttgctc 650  
atcagtttg cacagtggca attttggac tgatttagaa cagaaactcc 700  
atttggAACCC cgaggacaaa ggttatgtgc ttcacatgtat cactactgca 750  
gcagaatggt ctatgtcatt ttcccttctt ggtttttcc tgacttacat 800  
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850  
taaccctcta tgacactgca cttggcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatttgc atgaaaggat aaaatatttc tgtaatgatt 950  
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000  
tgaaaatttca aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
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gaaaataaag tcaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23  
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20 25 30  
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
35 40 45  
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
50 55 60  
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75  
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
80 85 90  
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105  
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120  
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile  
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp  
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu  
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp  
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala  
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr  
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn  
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn  
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile  
260 265

<210> 24  
<211> 485  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 14, 484  
<223> unknown base

<400> 24  
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gagcggagat cctcaaacgg ccttagtgctt cgcgcttccg gagaaaaatca 150  
gcggtctaatt taattcctct ggtttgttga agcagttacc aagaatcttc 200  
aaccctttcc cacaaaagct aattgagttac acgttcctgt tgagtacacg 250  
ttcctgttga tttacaaaag gtgcaggat gagcaggatct gaagactaac 300  
attttgtgaa gttgtaaaac agaaaaacctg ttagaaatgt ggtggttca 350  
gcaaggccctc agtttccttc cttagccct tgtaatttgg acatctgctg 400  
ctttcatatt ttccatacatt actgcagtaa cactccacca tatagacccg 450  
gctttacccctt atatcagtga cactggtaca gtanc 485

<210> 25  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 25  
acctgttaga aatgtggtgg tttcagcaag gcctcagtt 40  
  
<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 26  
ggagatagct gctatgggtt cttcaggcac aacttaacat ggaaag 46  
  
<210> 27  
<211> 1399  
<212> DNA  
<213> Homo sapiens  
  
<400> 27  
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ctgccccgcg ggccgggggtg cggagccgac atgcgccccgc ttctcgccct 100  
ccttctggtc ttgcggcgat gcaccttcgc cttgtacttg ctgtcgacgc 150  
gactgccccg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200  
tcgctgtggc tcccctccga cctggcagag ctgcgggagc tctctgaggt 250  
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctttct 300  
gcggcgcccta cctctacaaa cagggctttg ccatccccgg ctccagcttc 350  
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400  
gtgctgtgtg ttgacctcgg tgggtgccac atgctgtac ctgctctcca 450  
gtatttttgg caaacagttt gtgggtgtcct actttcctga taaagtggcc 500  
ctgctgcaga gaaagggtgga ggagaacaga aacagcttgtt tttttttctt 550  
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cgcccccaat tctgaacatt cccatcgatgc agttcttctt ctcagttctt 650  
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatcct 700  
gtcaacccta acctctctgg atgcttttt ctcctggac actgtcttta 750  
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tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900  
ctggactcag ttgcttattt gtgtatggc tgggtgcctc taaagccccct 950  
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agaaaaatgct gtttggcc gggcgccgtg gctcacgcct gtaatcccag 1150  
cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200  
agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaaatta 1250  
gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
gcaggagaat tgcttgaacc aaggtggcag aggttgcagt aagccaagat 1350  
cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr
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Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg
									25					30
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro
									40					45
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu
									55					60
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly
									65					75
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe
									80					90
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu
									95					105
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr
									110					120
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe
									125					135
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg
									140					150
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met
									155					165
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile
									170					180
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro
									185					195
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu
									200					210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu  
215 220 225  
Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys  
230 235 240  
Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala  
245 250 255  
Asn His Ile His Ser Arg Lys Asp Thr  
260

<210> 29  
<211> 1292  
<212> DNA  
<213> Homo sapiens

<400> 29  
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gtcaatcatt ttccagttct cagccgctca gttgtatca agggacacgt 100  
ggtttccgaa ctgccagctc agaataggaa aataacttgg gatTTTatat 150  
tggaagacat ggatcttgc tccaaacgaga tcagcatttta tgacaaactt 200  
tcagagactg ttgatttggt gagacagacc ggccatcatgt gtggcatgtc 250  
agagaaggca attaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
ctcagagacc ccccccgcag tatcctctcc ttatagttgt gtataagggt 350  
ctcgcaacct tgggattaat cttgtctact gcctactttg tgattcaacc 400  
tttcagccca ttagcacctg agccagtgt ttctggagct cacacctggc 450  
gctcaactcat ccacacatt aggctgtatgt ctttgcatt tgccaagaag 500  
tacatgttagaaaataaggaa agttcctctg catgggggtg atgaagacag 550  
accctttcca gactttgacc cctggtgac aaacgactgt gagcagaatg 600  
agtcagagcc cattcctgccc aactgcactg gctgtccca gaaacacctg 650  
aagggtatgc tccttggaaa cggcccaagg aaatttgaga ggctccatcc 700  
actggtgatc aagacggaa agccccgtt ggaggaagag attcagcatt 750  
ttttgtgcca gtaccctgag ggcacagaag gcttctctga agggtttttc 800  
gccaagtgggt ggcgctgctt tccgtggcgg tgggtccat tcccttatcc 850  
atggaggaga cctctgaaca gatcacaaat gttacgttag cttttcctg 900  
ttttcactca cctgccattt ccaaaagatg cctctttaaa caagtgcctcc 950  
tttcttcacc cagaacactgt tgtggggagt aagatgcata agatgcctga 1000  
cctatTTTATC attggcagcg gtggggccat gttgcagctc atccctccct 1050  
tccagtggccg aagacattgt cagtctgtgg ccatgcaat agagccaggg 1100  
gatatcggt atgtcgacac caccactgg aaggcttacg ttatagccag 1150

aggggtccag cctttggta tctgcgatgg aaccgcttc tcagaactgt 1200  
aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggtt 1250  
gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30  
<211> 347  
<212> PRT  
<213> Homo sapiens

<400> 30  
Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser  
1 5 10 15  
Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met  
20 . 25 30  
Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys  
35 40 45  
Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val  
50 55 60  
Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala  
65 70 75  
Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val  
80 85 90  
Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg  
95 100 105  
Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys  
110 115 120  
Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp  
125 130 135  
Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu  
140 145 150  
Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys  
155 160 165  
Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His  
170 175 180  
Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile  
185 190 195  
Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser  
200 205 210  
Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp  
215 220 225  
Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln  
230 235 240  
Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro  
245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro  
260 265 270  
Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile  
275 280 285  
Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys  
290 295 300  
Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp  
305 310 315  
Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala  
320 325 330  
Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser  
335 340 345

Glu Leu

<210> 31  
<211> 478  
<212> DNA  
<213> Homo sapiens

<400> 31  
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gcccgggggg cgcgagcccc gcatgaatca ttgttagtcaa tcattttcca 100  
gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150  
agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200  
ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250  
ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
aaaatttatac agacagctgc tggaaaagaa tgaacctcag agacccccc 350  
cgcagtatcc tctccttata gtttgtata aggttctcgc aaccttggga 400  
ttaatcttgc tcactgccta ctttgtgatt caaccttca gcccattagc 450  
acctgagcca gtgcgttgc gagctcac 478

<210> 32  
<211> 3531  
<212> DNA  
<213> Homo sapiens

<400> 32  
cccacgcgtc cggccacgcg tccggctgaa cacctttct ttggagtcag 50  
ccactgatga ggcagggtcc ccacttgcag ctgcagcagc tgcaagcact 100  
gcagagcgt gctcctggct ggtgccactg gtgcgcacgc tgctagaccc 150  
tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccaccca 200  
ccaatggcag ccccaccttc tttgaagact tccaggctt ttgtgccaca 250

cccgaaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300  
gttcgaaatg gacacgtatg ctaagagcca cgaccattatg tcaggttct 350  
gaaatgcctg ctatgacatg cttatgagca gtgggcagcg gcccagtgg 400  
gagcgcgccc agagtcgtcg ggccttccag gagctggtgc tggAACCTGC 450  
gcagaggcgg ggcgcctgg agggctacg ctacacggca gtgctgaagc 500  
agcaggcaac gcagcactcc atggccctgc tgcactgggg ggcgcgtgtgg 550  
cgccagctcg ccagccccatg tggggcctgg ggcgtgaggg acactcccat 600  
cccccgctgg aaactgtcca ggcgcgagac atattcacgc atgcgtctga 650  
agctggtgcc caaccatcac ttgcaccctc accttggaaagc cagcgctctc 700  
cgagacaatc tgggtgaggt tcccctgaca cccacccgagg aggcctca 750  
gcctctggca gtgaccaaag aggcacaaagt gagcaccccc cccgagttgc 800  
tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagaccccg 850  
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cgagtgccag ctggtgacgg tagtggccgt ggtcccaggg ctgctggagg 950  
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accgaggagg gcatcggtta tgatttccgg cgcccaactgg cccagctgcg 1050  
tgaggtccac ctgcggcggt tcaacctgcg ccgttcagca cttagctct 1100  
tctttatoga tcaggccaac tacttcctca acttcccatg caagggtggc 1150  
acgaccccaag tctcatctcc tagccagact ccgagacccc agcctggccc 1200  
catccccaccc catacccaagg tacggaaacca ggtgtactcg tggctcctgc 1250  
gcctacggcc cccotctcaa ggctaccta gcaagccgctc ccccaaggag 1300  
atgctgcgtg cctcaggcct tacccagaaa tgggtacagc gtgagatatac 1350  
caacttcgag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400  
atgacctgtc tcagtagccct gtgttccct gggcctgcgaa ggactacgtg 1450  
tcccccaaccc tggacctcag caacccagcc gtcttccggg acctgtctaa 1500  
gcccatcggt gtggtaacc ccaagcatgc ccagctcggt agggagaagt 1550  
atgaaagctt tgaggaccca gcagggacca ttgacaagtt ccactatggc 1600  
acccactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650  
gcccttcacc tccctgcacg tccagctgcgaa aagtggccgc tttgactgct 1700  
ccgacccggca gttccactcg gtggcggcag cctggcaggc acgcctggag 1750  
agccctgccc atgtgaagga gctcatcccg gaattttctt actttcctga 1800  
cttccctggag aaccagaacg gtttgacccct gggcgtgtctc cagctgacca 1850

acgagaaggta aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900  
gacttcatcc agcagcacccg ccaggctctg gagtcggagt atgtgtctgc 1950  
acacctacac gagtgatcg acctcatctt tggctacaag cagccccggc 2000  
cagccgccga ggaggccctc aatgtcttctt attactgcac ctatgagggg 2050  
gctgttagacc tggaccatgt gacagatgag cgaaaacgga aggctctgga 2100  
ggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150  
cacatccaac tcggctctca gctgaggaag cagccatcg cttgcacgc 2200  
ctggacacta actcacctag catcttccag cacctggacg aactcaaggc 2250  
attcttcgca gaggtgactg tgagtgcag tggctgctg ggcacccaca 2300  
gctgggtgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350  
gaccccacca tggcagcca caagacgcag cgactgctga gtggccctg 2400  
gtgccaggc agtgggtgtga gtggacaagc actggcagtg gccccggatg 2450  
gaaagctgct attcagcggt gcccactggg atggcagcct gcgggtgact 2500  
gcactacccc gtggcaagct gttgagccag ctcagctgcc accttgatgt 2550  
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cccggacac cacgtgcatg gtgtggccgc tcctgcatca gggtggtctg 2650  
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gatctgagga tggaaactgtg atcatacaca ctgtacgccc cggacagttt 2800  
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cctggcattt gggcccaag gccagattgt ggtacagagc tcagcgtggg 2900  
aacgtcctgg ggcccaggc acctactcct tgcacctgta ttcagtcaat 2950  
ggaaaggttgc gggcttcact gcccctggca gagcagccca cagccctgac 3000  
ggtgacagag gactttgtgt tgctggcac ccggcaggc gcccctgcaca 3050  
tcctccaact aaacacactg ctcccgccg cgcctccctt gcccatgaag 3100  
gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgcttgt 3150  
gggcctggag gatggcaagc tcacgttgtt ggtcgccggg cagccctctg 3200  
aggtgcgcag cagccaggcc ggcggaaagc tggcggcgc ctcgcggcgc 3250  
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ctgaacctgg ccagtccggc tgctggggcc ccgcgggggg cagccctggc 3350  
ccgggaggcc cggcccaagaa gtcggcggga acacccggg gtggcagcc 3400  
caggggtga gcggggccca ccctgcccag ctcaggatt ggcggccgat 3450

gttacccctt caggattgg cggcgaaag tccccccctt cgccggctga 3500

ggggccgccc tgagggccag cactggcgtc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu  
1 5 10 15

Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser  
20 25 30

Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe  
35 40 45

Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
50 55 60

Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
65 70 75

Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
80 85 90

Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
95 100 105

Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys  
110 115 120

Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala  
125 130 135

Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu  
140 145 150

Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
155 160 165

Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
170 175 180

Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
185 190 195

Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val  
200 205 210

Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val  
215 220 225

Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly  
230 235 240

Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val  
245 250 255

His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe  
260 265 270

Phe Ile Asp Gln Ala Asn Tyr Phe Leu Asn Phe Pro Cys Lys Val  
 275 280 285  
 Gly Thr Thr Pro Val Ser Ser Pro Ser Gln Thr Pro Arg Pro Gln  
 290 295 300  
 Pro Gly Pro Ile Pro Pro His Thr Gln Val Arg Asn Gln Val Tyr  
 305 310 315  
 Ser Trp Leu Leu Arg Leu Arg Pro Pro Ser Gln Gly Tyr Leu Ser  
 320 325 330  
 Ser Arg Ser Pro Gln Glu Met Leu Arg Ala Ser Gly Leu Thr Gln  
 335 340 345  
 Lys Trp Val Gln Arg Glu Ile Ser Asn Phe Glu Tyr Leu Met Gln  
 350 355 360  
 Leu Asn Thr Ile Ala Gly Arg Thr Tyr Asn Asp Leu Ser Gln Tyr  
 365 370 375  
 Pro Val Phe Pro Trp Val Leu Gln Asp Tyr Val Ser Pro Thr Leu  
 380 385 390  
 Asp Leu Ser Asn Pro Ala Val Phe Arg Asp Leu Ser Lys Pro Ile  
 395 400 405  
 Gly Val Val Asn Pro Lys His Ala Gln Leu Val Arg Glu Lys Tyr  
 410 415 420  
 Glu Ser Phe Glu Asp Pro Ala Gly Thr Ile Asp Lys Phe His Tyr  
 425 430 435  
 Gly Thr His Tyr Ser Asn Ala Ala Gly Val Met His Tyr Leu Ile  
 440 445 450  
 Arg Val Glu Pro Phe Thr Ser Leu His Val Gln Leu Gln Ser Gly  
 455 460 465  
 Arg Phe Asp Cys Ser Asp Arg Gln Phe His Ser Val Ala Ala Ala  
 470 475 480  
 Trp Gln Ala Arg Leu Glu Ser Pro Ala Asp Val Lys Glu Leu Ile  
 485 490 495  
 Pro Glu Phe Phe Tyr Phe Pro Asp Phe Leu Glu Asn Gln Asn Gly  
 500 505 510  
 Phe Asp Leu Gly Cys Leu Gln Leu Thr Asn Glu Lys Val Gly Asp  
 515 520 525  
 Val Val Leu Pro Pro Trp Ala Ser Ser Pro Glu Asp Phe Ile Gln  
 530 535 540  
 Gln His Arg Gln Ala Leu Glu Ser Glu Tyr Val Ser Ala His Leu  
 545 550 555  
 His Glu Trp Ile Asp Leu Ile Phe Gly Tyr Lys Gln Arg Gly Pro  
 560 565 570  
 Ala Ala Glu Glu Ala Leu Asn Val Phe Tyr Tyr Cys Thr Tyr Glu  
 575 580 585

Gly Ala Val Asp Leu Asp His Val Thr Asp Glu Arg Glu Arg Lys  
 590 595 600  
 Ala Leu Glu Gly Ile Ile Ser Asn Phe Gly Gln Thr Pro Cys Gln  
 605 610 615  
 Leu Leu Lys Glu Pro His Pro Thr Arg Leu Ser Ala Glu Glu Ala  
 620 625 630  
 Ala His Arg Leu Ala Arg Leu Asp Thr Asn Ser Pro Ser Ile Phe  
 635 640 645  
 Gln His Leu Asp Glu Leu Lys Ala Phe Phe Ala Glu Val Thr Val  
 650 655 660  
 Ser Ala Ser Gly Leu Leu Gly Thr His Ser Trp Leu Pro Tyr Asp  
 665 670 675  
 Arg Asn Ile Ser Asn Tyr Phe Ser Phe Ser Lys Asp Pro Thr Met  
 680 685 690  
 Gly Ser His Lys Thr Gln Arg Leu Leu Ser Gly Pro Trp Val Pro  
 695 700 705  
 Gly Ser Gly Val Ser Gly Gln Ala Leu Ala Val Ala Pro Asp Gly  
 710 715 720  
 Lys Leu Leu Phe Ser Gly Gly His Trp Asp Gly Ser Leu Arg Val  
 725 730 735  
 Thr Ala Leu Pro Arg Gly Lys Leu Leu Ser Gln Leu Ser Cys His  
 740 745 750  
 Leu Asp Val Val Thr Cys Leu Ala Leu Asp Thr Cys Gly Ile Tyr  
 755 760 765  
 Leu Ile Ser Gly Ser Arg Asp Thr Thr Cys Met Val Trp Arg Leu  
 770 775 780  
 Leu His Gln Gly Gly Leu Ser Val Gly Leu Ala Pro Lys Pro Val  
 785 790 795  
 Gln Val Leu Tyr Gly His Gly Ala Ala Val Ser Cys Val Ala Ile  
 800 805 810  
 Ser Thr Glu Leu Asp Met Ala Val Ser Gly Ser Glu Asp Gly Thr  
 815 820 825  
 Val Ile Ile His Thr Val Arg Arg Gly Gln Phe Val Ala Ala Leu  
 830 835 840  
 Arg Pro Leu Gly Ala Thr Phe Pro Gly Pro Ile Phe His Leu Ala  
 845 850 855  
 Leu Gly Ser Glu Gly Gln Ile Val Val Gln Ser Ser Ala Trp Glu  
 860 865 870  
 Arg Pro Gly Ala Gln Val Thr Tyr Ser Leu His Leu Tyr Ser Val  
 875 880 885  
 Asn Gly Lys Leu Arg Ala Ser Leu Pro Leu Ala Glu Gln Pro Thr  
 890 895 900

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln  
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala  
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr  
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu  
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln  
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val  
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg  
995 1000

<210> 34  
<211> 43  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 34  
tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35  
<211> 1395  
<212> DNA  
<213> Homo sapiens

<400> 35  
cggacgcgtg ggcggacgcg tggggctgt gagaaagtgc caataaatac 50  
atcatgcaac cccacggccc acottgtgaa ctcctcggtc ccagggtgt 100  
tgtgcgtttt ccagggctac tcattccaaag gcctaattcca acgttctgtc 150  
ttcaatctgc aaatctatgg ggtcctgggg ctcttctggta cccttaactg 200  
gttactggcc ctggggcaat gcgtcctcg tggagcctt gcctccttct 250  
actgggcattt ccacaagccc caggacatcc ctacattcccc cttaatctct 300  
gccttcattcc gcacactccg ttaccacact gggtcattgg catttggagc 350  
cctcatcctg acccttgc agatagcccc ggttatctt ggttatattt 400  
accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450  
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500  
ccgcaatgca tacatcatga tcgccccatcta cggaaagaat ttctgtgtct 550  
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggc 600  
gtcctggaca aagtccacaga cctgctgctg ttctttggaa agctgctgg 650

gtcggaggc gtgggggtcc tgtccttctt tttttctcc ggtcgcatcc 700  
ccccggctggg taaagacttt aagagcccc acctaacta ttactggctg 750  
cccatcatga cctccatcct gggggcctat gtcatcgcca gcggcttctt 800  
cagcgtttc ggcatgtgtg tggacacgct cttcctctgc ttccctgaaag 850  
acctggagcg gaacaacggc tccctggacc ggccctacta catgtccaag 900  
agccttctaa agattctggg caagaagaac gaggcgcccc cgacacaacaa 950  
gaagaggaag aagtgacagc tccggccctg atccaggact gcacccacc 1000  
cccaccgtcc agccatccaa cctcaacttcg ctttacaggt ctccattttg 1050  
tggtaaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100  
acacttttagg aggctgagggc gggcggatca cctgagtcag gagttcgaga 1150  
ccagcctggc caacatggtg aaacctccgt ctctattaaa aataaaaaaa 1200  
ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggaggct 1250  
gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300  
gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350  
aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36  
<211> 321  
<212> PRT  
<213> Homo sapiens

<400> 36  
Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile  
1 5 10 15  
Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys  
20 25 30  
Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu  
35 40 45  
Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly  
50 55 60  
Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val  
65 70 75  
Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro  
80 85 90  
Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr  
95 100 105  
Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu  
110 115 120  
Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His  
125 130 135

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys  
                   140                  145                  150  
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe  
                   155                  160                  165  
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn  
                   170                  175                  180  
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn  
                   185                  190                  195  
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu  
                   200                  205                  210  
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser  
                   215                  220                  225  
 Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe  
                   230                  235                  240  
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser  
                   245                  250                  255  
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe  
                   260                  265                  270  
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu  
                   275                  280                  285  
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys  
                   290                  295                  300  
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp  
                   305                  310                  315  
 Asn Lys Lys Arg Lys Lys  
                   320

<210> 37  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 37  
 tcgtgccccag gggctgtatgt gc 22

<210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 gtctttaccc agccccggga tgcg 24

<210> 39  
 <211> 50

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 39  
ggcctaattcc aacgttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40  
<211> 1365  
<212> DNA  
<213> Homo sapiens

<400> 40  
gagtcttgc acgcccggg ctcttggtac ctcagcgca gcgccaggcg 50  
tccggccggc gtggctatgt tcgtgtccga tttccgcaaa gagttctacg 100  
aggtgttcca gagccagagg gtccattctt tcgtggcctc ggacgtggat 150  
gctctgttg cgtcaagat cttcaggcc ttgttccagt gtgaccacgt 200  
gcaatatacg ctggttccag tttctgggt gcaagaactt gaaactgcat 250  
ttcttgagca taaagaacag tttcattttt ttattctcat aaactgtgga 300  
gctaatgttag acctatttgg aattcttcaa cctgatgaag acactatatt 350  
ctttgtgtgt gactccata ggccagtcaa tgtcgtcaat gtataacaacg 400  
atacccagat caaattactc attaaacaag atgatgaccc tgaagttccc 450  
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500  
aaatgacagt gatgggtcag agcattctga gaagcgcaca cggttagaaag 550  
aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtggag 600  
gccccggagaa gagacatcct ctttgactac gagcagatgt aatatcatgg 650  
gacatcgtaa gccatggta tggtttagct ggcttggatg ctgtccaagg 700  
acctgaatga catgctgtgg tggccatcg ttggactaac agaccagtgg 750  
gtgcaagaca agatcactca aatgaaatac gtgactgtatg ttgtgttcct 800  
gcagcgccac gttcccgcc acaaccacccg gaacgaggat gaggagaaca 850  
cactctccgt ggactgcaca cggatctcct ttgagttatga cttccgcctg 900  
tgctctacc agcactggc cttccatgac agoctgtgca acaccagcta 950  
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000  
aggagttccct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050  
ttccaggcca tggacatctc cttgaaggag aatttgccggg aaatgatgt 1100  
agagtctgca aataaaatttggatgaagga catgcgcgtg cagactttca 1150  
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctggatgga gagcccccag aaggatggct cagggacaga 1250  
tcacttcattc caggctctgg acagcctctc caggagtaac ctggacaaggc 1300  
tgtaccatgg cctgaaactc gccaagaaggc agctgcgagc cacccagcag 1350  
accattgcca gctgc 1365

<210> 41  
<211> 566  
<212> PRT  
<213> Homo sapiens

<400> 41  
Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln  
1 5 10 15  
Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu  
20 25 30  
Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
35 40 45  
Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
50 55 60  
Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
65 70 75  
Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
80 85 90  
Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
95 100 105  
Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
110 115 120  
Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
125 130 135  
Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
140 145 150  
Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
155 160 165  
Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
170 175 180  
Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
185 190 195  
Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
200 205 210  
Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr  
215 220 225  
Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr  
230 235 240  
Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu Glu Asn Thr Leu Ser Val Asp Cys Thr Arg Ile		
260	265	270
Ser Phe Glu Tyr Asp Leu Arg Leu Val Leu Tyr Gln His Trp Ser		
275	280	285
Leu His Asp Ser Leu Cys Asn Thr Ser Tyr Thr Ala Ala Arg Phe		
290	295	300
Lys Leu Trp Ser Val His Gly Gln Lys Arg Leu Gln Glu Phe Leu		
305	310	315
Ala Asp Met Gly Leu Pro Leu Lys Gln Val Lys Gln Lys Phe Gln		
320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn Leu Arg Glu Met Ile Glu		
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys Asp Met Arg Val Gln Thr		
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His Lys Phe Leu Ala Ser Asp		
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met Glu Ser Pro Glu Lys Asp		
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln Ala Leu Asp Ser Leu Ser		
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His Gly Leu Glu Leu Ala Lys		
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr Ile Ala Ser Cys Leu Cys		
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro Phe Leu Tyr Cys Ser Leu		
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu Phe Ser Arg Pro Ala Ser		
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu Lys Ser Phe Val Cys Ser		
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu Pro Leu Val Met Ala Ala		
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val Thr Val Val Gly Ile Pro		
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys Asn Phe Phe Gly Arg Ala		
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser Ser Arg Met Leu His Asn		
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu Lys Ala Glu Asp Arg Ser		
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu Leu Ser		

<210> 42  
 <211> 380  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 44, 118, 172, 183  
 <223> unknown base

<400> 42  
 gtacacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcggt 50  
 ccgatttccg caaagagttc tacgagggtgg tccagagcca gagggtcctt 100  
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
 ggccttggtc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200  
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250  
 tattttatttc tcataaaactg tggagcta at gtagacctat tggatattct 300  
 tcaaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350  
 tcaatgttgtt caatgtatac aacgataaccc 380

<210> 43  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 43  
 ttccgcaaag agttctacga ggtgg 25

<210> 44  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 44  
 attgacaaca ttgactggcc tatggg 26

<210> 45  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 45  
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089  
<212> DNA  
<213> Homo sapiens

<400> 46  
caggaaccct ctcttgggt ctggattggg accccttcc agtaccattt 50  
tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100  
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Leu Glu Leu Lys Leu Gln Asp Asn Glu Leu Arg Ala Leu Pro Pro		
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<213> Homo sapiens

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35 40 45  
Leu Thr Pro Ala Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
50 55 60  
Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
65 70 75  
Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
80 85 90

Thr Phe Glu Phe Asn Lys Glu Leu Arg Tyr Leu Asp Leu Ser Asn  
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 Asn Arg Leu Lys Ser Val Thr Trp Tyr Leu Leu Ala Gly Leu Arg  
                   110                  115                  120  
 Tyr Leu Asp Leu Ser Phe Asn Asp Phe Asp Thr Met Pro Ile Cys  
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 Glu Glu Ala Gly Asn Met Ser His Leu Glu Ile Leu Gly Leu Ser  
                   140                  145                  150  
 Gly Ala Lys Ile Gln Lys Ser Asp Phe Gln Lys Ile Ala His Leu  
                   155                  160                  165  
 His Leu Asn Thr Val Phe Leu Gly Phe Arg Thr Leu Pro His Tyr  
                   170                  175                  180  
 Glu Glu Gly Ser Leu Pro Ile Leu Asn Thr Thr Lys Leu His Ile  
                   185                  190                  195  
 Val Leu Pro Met Asp Thr Asn Phe Trp Val Leu Leu Arg Asp Gly  
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 Ile Lys Thr Ser Lys Ile Leu Glu Met Thr Asn Ile Asp Gly Lys  
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 Ser Gln Phe Val Ser Tyr Glu Met Gln Arg Asn Leu Ser Leu Glu  
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 Asn Ala Lys Thr Ser Val Leu Leu Leu Asn Lys Val Asp Leu Leu  
                   245                  250                  255  
 Trp Asp Asp Leu Phe Leu Ile Leu Gln Phe Val Trp His Thr Ser  
                   260                  265                  270  
 Val Glu His Phe Gln Ile Arg Asn Val Thr Phe Gly Gly Lys Ala  
                   275                  280                  285  
 Tyr Leu Asp His Asn Ser Phe Asp Tyr Ser Asn Thr Val Met Arg  
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 Thr Ile Lys Leu Glu His Val His Phe Arg Val Phe Tyr Ile Gln  
                   305                  310                  315  
 Gln Asp Lys Ile Tyr Leu Leu Leu Thr Lys Met Asp Ile Glu Asn  
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 Leu Thr Ile Ser Asn Ala Gln Met Pro His Met Leu Phe Pro Asn  
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 Tyr Pro Thr Lys Phe Gln Tyr Leu Asn Phe Ala Asn Asn Ile Leu  
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 Thr Asp Glu Leu Phe Lys Arg Thr Ile Gln Leu Pro His Leu Lys  
                   365                  370                  375  
 Thr Leu Ile Leu Asn Gly Asn Lys Leu Glu Thr Leu Ser Leu Val  
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 Ser Cys Phe Ala Asn Asn Thr Pro Leu Glu His Leu Asp Leu Ser  
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Gln Asn Leu Leu Gln His Lys Asn Asp Glu Asn Cys Ser Trp Pro  
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 620 625 630  
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 Gly Ser Ile Leu Ile Cys Leu Tyr Glu Ser Tyr Phe Asp Pro Gly  
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 680 685 690  
 Lys Ser Ile Phe Val Leu Ser Pro Asn Phe Val Gln Asn Glu Trp  
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 Cys His Tyr Glu Phe Tyr Phe Ala His His Asn Leu Phe His Glu  
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Asn Ser Asp His Ile Ile Leu Ile Leu Leu Glu Pro Ile Pro Phe  
725 730 735

Tyr Cys Ile Pro Thr Arg Tyr His Lys Leu Lys Ala Leu Leu Glu  
740 745 750

Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg Arg Lys Cys Gly  
755 760 765

Leu Phe Trp Ala Asn Leu Arg Ala Ala Ile Asn Val Asn Val Leu  
770 775 780

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Leu

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 58

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<210> 59

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 59

ttatagacaa tctgttctca tcagaga 27

<210> 60

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

aaaaagcata cttggaatgg cccaggata ggtgtaaatg 40

<210> 61

<211> 3772

<212> DNA

<213> Homo sapiens

<400> 61

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<212> PRT  
<213> Homo sapiens

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35 40 45  
Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro  
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Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu  
65 70 75  
Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys  
80 85 90  
Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser  
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Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn  
110 115 120  
Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser  
125 130 135  
Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln  
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Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg  
155 160 165  
Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr  
170 175 180  
Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

185                    190                    195

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Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr
215									220					225
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys
230									235					240
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu
245								250						255
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr
260								265						270
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys
275								280						285
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn
290								295						300
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp
305								310						315
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val
320								325						330
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly
335								340						345
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp
350								355						360
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile
365								370						375
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu
380								385						390
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala
395								400						405
Arg	Ile	Val	His	Ile	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro
410								415						420
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser
425								430						435
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile
440								445						450
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu
455								460						465
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr
470								475						480
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala
485								490						495
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe

500                    505                    510

Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr
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Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr
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Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr
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Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys
					560				565				570	
His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala
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Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu
					590				595				600	
His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys
					605				610				615	
Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg
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Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys
					635				640				645	
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile
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Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp
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Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr
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Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val
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Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys
					710				715				720	
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys
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Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg
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Lys	Arg	Arg	Gln	Arg	Gly									
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<223> Synthetic oligonucleotide probe

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<212> DNA  
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<400> 64  
cgcgatgtag tggaactcg 24

<210> 65  
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<210> 67  
<211> 510  
<212> PRT  
<213> Homo sapiens

<400> 67  
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Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
35 40 45  
Phe Ser Ser Ser Arg Ser Gly Ser Ser Ser Arg Ser Leu  
50 55 60  
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
65 70 75  
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
80 85 90  
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
95 100 105  
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
110 115 120  
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
125 130 135  
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
140 145 150  
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
155 160 165  
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
170 175 180  
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
185 190 195  
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
200 205 210

Ala Ile Arg Arg Glu Ile Val Ala Leu Lys Thr Lys Leu Lys Glu  
 215 220 225  
 Cys Glu Ala Ser Lys Asp Gln Asn Thr Pro Val Val His Pro Pro  
 230 235 240  
 Pro Thr Pro Gly Ser Cys Gly His Gly Val Val Asn Ile Ser  
 245 250 255  
 Lys Pro Ser Val Val Gln Leu Asn Trp Arg Gly Phe Ser Tyr Leu  
 260 265 270  
 Tyr Gly Ala Trp Gly Arg Asp Tyr Ser Pro Gln His Pro Asn Lys  
 275 280 285  
 Gly Leu Tyr Trp Val Ala Pro Leu Asn Thr Asp Gly Arg Leu Leu  
 290 295 300  
 Glu Tyr Tyr Arg Leu Tyr Asn Thr Leu Asp Asp Leu Leu Tyr  
 305 310 315  
 Ile Asn Ala Arg Glu Leu Arg Ile Thr Tyr Gly Gln Gly Ser Gly  
 320 325 330  
 Thr Ala Val Tyr Asn Asn Asn Met Tyr Val Asn Met Tyr Asn Thr  
 335 340 345  
 Gly Asn Ile Ala Arg Val Asn Leu Thr Thr Asn Thr Ile Ala Val  
 350 355 360  
 Thr Gln Thr Leu Pro Asn Ala Ala Tyr Asn Asn Arg Phe Ser Tyr  
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 380 385 390  
 Gly Leu Trp Val Ile Tyr Ser Thr Glu Ala Ser Thr Gly Asn Met  
 395 400 405  
 Val Ile Ser Lys Leu Asn Asp Thr Thr Leu Gln Val Leu Asn Thr  
 410 415 420  
 Trp Tyr Thr Lys Gln Tyr Lys Pro Ser Ala Ser Asn Ala Phe Met  
 425 430 435  
 Val Cys Gly Val Leu Tyr Ala Thr Arg Thr Met Asn Thr Arg Thr  
 440 445 450  
 Glu Glu Ile Phe Tyr Tyr Asp Thr Asn Thr Gly Lys Glu Gly  
 455 460 465  
 Lys Leu Asp Ile Val Met His Lys Met Gln Glu Lys Val Gln Ser  
 470 475 480  
 Ile Asn Tyr Asn Pro Phe Asp Gln Lys Leu Tyr Val Tyr Asn Asp  
 485 490 495  
 Gly Tyr Leu Leu Asn Tyr Asp Leu Ser Val Leu Gln Lys Pro Gln  
 500 505 510

<210> 68  
 <211> 410  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68  
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ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agagggttt 150  
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gtattataga ctgtacaacc cactggatga tttgttattt tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtagtggcac agcagttac 350  
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69  
agctgtggtc atggtgtgt ggtg 24

<210> 70  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70  
ctaccttggc cataggtgat ccgc 24

<210> 71  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71  
catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72  
<211> 3127  
<212> DNA  
<213> Homo sapiens

<400> 72  
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tggggctgtg ctccatggcg agctggatac catgttgtg tggaaagtgcc 150  
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tagattgatc tatgcacttt tcttgcttgt tggagttatgt gtagcttgt 250  
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atgaattcag agaaaaaaaaaaaaaaa 3127

<210> 73  
<211> 453  
<212> PRT  
<213> Homo sapiens

<400> 73  
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20 25 30  
Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe  
35 40 45  
Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly  
50 55 . 60  
Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu  
65 70 75  
Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val  
80 85 90  
Tyr Arg Leu Cys Phe Gly Leu Ala Met Phe Tyr Leu Leu Leu Ser  
95 100 105  
Leu Leu Met Ile Lys Val Lys Ser Ser Asp Pro Arg Ala Ala  
110 115 120  
Val His Asn Gly Phe Trp Phe Lys Phe Ala Ala Ala Ile Ala  
125 130 135  
Ile Ile Ile Gly Ala Phe Phe Ile Pro Glu Gly Thr Phe Thr Thr  
140 145 150  
Val Trp Phe Tyr Val Gly Met Ala Gly Ala Phe Cys Phe Ile Leu  
155 160 165  
Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Glu  
170 175 180  
Ser Trp Val Glu Lys Met Glu Glu Gly Asn Ser Arg Cys Trp Tyr  
185 190 195  
Ala Ala Leu Leu Ser Ala Thr Ala Leu Asn Tyr Leu Leu Ser Leu  
200 205 210  
Val Ala Ile Val Leu Phe Phe Val Tyr Tyr Thr His Pro Ala Ser  
215 220 225  
Cys Ser Glu Asn Lys Ala Phe Ile Ser Val Asn Met Leu Leu Cys  
230 235 240  
Val Gly Ala Ser Val Met Ser Ile Leu Pro Lys Ile Gln Glu Ser  
245 250 255  
Gln Pro Arg Ser Gly Leu Leu Gln Ser Ser Val Ile Thr Val Tyr  
260 265 270  
Thr Met Tyr Leu Thr Trp Ser Ala Met Thr Asn Glu Pro Glu Thr  
275 280 285

Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr  
290 295 300

Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala  
305 310 315

Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr  
320 325 330

Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr  
335 340 345

Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg  
350 355 360

Ser Asp Gly Ser Leu Glu Asp Gly Asp Asp Val His Arg Ala Val  
365 370 375

Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His  
380 385 390

Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr  
395 400 405

Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp  
410 415 420

Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val  
425 430 435

Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg  
440 445 450

Asp Phe Asp

<210> 74  
<211> 480  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48, 163  
<223> unknown base

<400> 74  
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ataccatgtt tgtgtggaaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
tagtgaaac aantccactg taacttagatt gatctatgca cttttcttgc 200  
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DNA sequence analysis

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<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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caggattgga ngtacaactg aataagattc ctggattttt gtgagaatga 150
gaaagggtgtt gtccccttgtt aacatttttgg gttggctata aagctgtata 200
tcgtttgtgc tttgggttgg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttgggttct tttaaatttgc tgcagcaattt gcaatttattt ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattgg 400
caggtgcctt ttgtttcatc ctcatacaac tagtcttactt tattgattttt 450
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gagatgttgg tatgcagcct tggttatcagc tacagctctg aattatctgc 550
tgtcttttagt tgctatcgatc ctgttcttgc tctactacac tcattccagcc 600
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tggtgcttctt gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgtt ggaagtgcccg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
aatccattgt gcactgcagc tctagg 26

<210> 81  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
gagcatgcac ccactggact gac 23

<210> 82  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 82  
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gcac 54

<210> 83  
<211> 3906  
<212> DNA  
<213> Homo sapiens

<400> 83  
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gcggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100  
cgcgaggctt tcggcaaagg cagtcgagtg tttcagacc gggcgagtc 150  
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<211> 867  
<212> PRT  
<213> Homo sapiens

<400> 84  
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35 40 45  
Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser  
50 55 60  
Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
65 70 75  
Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro  
80 85 90  
Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn  
95 100 105  
Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala  
110 115 120  
Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
125 130 135  
Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
140 145 150  
Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
155 160 165  
Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
170 175 180  
Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
185 190 195  
Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met  
200 205 210  
Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
215 220 225  
His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
230 235 240  
Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
245 250 255

Pro Asp Lys His Trp Ile Met Arg Tyr Thr Gly Pro Met Lys Pro  
 260 265 270  
 Ile His Met Glu Phe Thr Asn Met Leu Gln Arg Lys Arg Leu Gln  
 275 280 285  
 Thr Leu Met Ser Val Asp Asp Ser Met Glu Thr Ile Tyr Asn Met  
 290 295 300  
 Leu Val Glu Thr Gly Glu Leu Asp Asn Thr Tyr Ile Val Tyr Thr  
 305 310 315  
 Ala Asp His Gly Tyr His Ile Gly Gln Phe Gly Leu Val Lys Gly  
 320 325 330  
 Lys Ser Met Pro Tyr Glu Phe Asp Ile Arg Val Pro Phe Tyr Val  
 335 340 345  
 Arg Gly Pro Asn Val Glu Ala Gly Cys Leu Asn Pro His Ile Val  
 350 355 360  
 Leu Asn Ile Asp Leu Ala Pro Thr Ile Leu Asp Ile Ala Gly Leu  
 365 370 375  
 Asp Ile Pro Ala Asp Met Asp Gly Lys Ser Ile Leu Lys Leu Leu  
 380 385 390  
 Asp Thr Glu Arg Pro Val Asn Arg Phe His Leu Lys Lys Lys Met  
 395 400 405  
 Arg Val Trp Arg Asp Ser Phe Leu Val Glu Arg Gly Lys Leu Leu  
 410 415 420  
 His Lys Arg Asp Asn Asp Lys Val Asp Ala Gln Glu Glu Asn Phe  
 425 430 435  
 Leu Pro Lys Tyr Gln Arg Val Lys Asp Leu Cys Gln Arg Ala Glu  
 440 445 450  
 Tyr Gln Thr Ala Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys Val  
 455 460 465  
 Glu Asp Ala Thr Gly Lys Leu Lys Leu His Lys Cys Lys Gly Pro  
 470 475 480  
 Met Arg Leu Gly Gly Ser Arg Ala Leu Ser Asn Leu Val Pro Lys  
 485 490 495  
 Tyr Tyr Gly Gln Gly Ser Glu Ala Cys Thr Cys Asp Ser Gly Asp  
 500 505 510  
 Tyr Lys Leu Ser Leu Ala Gly Arg Arg Lys Lys Leu Phe Lys Lys  
 515 520 525  
 Lys Tyr Lys Ala Ser Tyr Val Arg Ser Arg Ser Ile Arg Ser Val  
 530 535 540  
 Ala Ile Glu Val Asp Gly Arg Val Tyr His Val Gly Leu Gly Asp  
 545 550 555  
 Ala Ala Gln Pro Arg Asn Leu Thr Lys Arg His Trp Pro Gly Ala  
 560 565 570

Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp Phe Ser Gly Thr  
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 Gly Gly Leu Pro Asp Tyr Ser Ala Ala Asn Pro Ile Lys Val Thr  
 590 595 600  
 His Arg Cys Tyr Ile Leu Glu Asn Asp Thr Val Gln Cys Asp Leu  
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 Asp Leu Tyr Lys Ser Leu Gln Ala Trp Lys Asp His Lys Leu His  
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 Ile Asp His Glu Ile Glu Thr Leu Gln Asn Lys Ile Lys Asn Leu  
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 Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg Pro Glu Glu Cys  
 650 655 660  
 Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys Gly Arg Leu  
 665 670 675  
 Lys His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly Leu Gln  
 680 685 690  
 Glu Lys Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys  
 695 700 705  
 Lys Leu Arg Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys  
 710 715 720  
 Ser Met Pro Gly Leu Thr Cys Phe Thr His Asp Asn Gln His Trp  
 725 730 735  
 Gln Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr  
 740 745 750  
 Ser Ala Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu  
 755 760 765  
 Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu  
 770 775 780  
 Tyr Phe Asp Leu Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val  
 785 790 795  
 Asn Thr Leu Asp Arg Asp Val Leu Asn Gln Leu His Val Gln Leu  
 800 805 810  
 Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys Gln Cys Asn Pro Arg  
 815 820 825  
 Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg  
 830 835 840  
 Gln Phe Gln Arg Arg Lys Trp Pro Glu Met Lys Arg Pro Ser Ser  
 845 850 855  
 Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp Glu Gly  
 860 865

<210> 85  
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<400> 85  
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<223> Synthetic oligonucleotide probe  
<400> 86  
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aagggcctgc aagagaag 18  
  
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<210> 91  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 91  
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<210> 92  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
tcataccaac tgctggcat tggc 24

<210> 93  
<211> 45  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

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<210> 94  
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<212> DNA  
<213> Homo sapiens

<400> 94  
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tgggcctcct ggggagcaca gccctcgtagt gatggatcac aggtgctgct 150  
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gggcctccac caccaccacc acccccggca caccctcac cacccaccacc 400  
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caggacaagt ggacccatg ttccatgtg gaaggatgca tctctggggt 550  
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gtgtcttggc agagccagca cacaagtgg a tgtgaagtgc ccgtcttgac 800  
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ccctgagaat gtcctttgg tttggagaag gcagtgtgag gctgcacagt 900  
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aaaaaaaaaa aaaaaaaaaa a 971

<210> 95  
<211> 115  
<212> PRT  
<213> Homo sapiens

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Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
35 40 45  
Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
50 55 60  
Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His  
65 70 75  
Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His  
80 85 90  
His His Pro Arg His Thr Pro His His Leu His His His His His  
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Pro His Arg His His Pro Arg His Ala Arg  
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<210> 96  
<211> 1312  
<212> DNA  
<213> Homo sapiens

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gctgacgctg ctggccttg ccgggtactc agggtactg gctgggtgg 150  
aagtgagtgc tgggtcaccc cccatccgca acgtcactgt ggcctacaag 200  
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 aaaaaaaaaa aa 1312

<210> 97  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn  
     35               40   45  
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr  
     50               55   60  
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg  
     65               70   75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp
				80					85					90
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu
				95					100					105
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe
				110					115					120
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr
				125					130					135
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg
				140					145					150
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys
				155					160					165
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe
				170					175					180
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met
				185					190					195
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp
				200					205					210
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser
				215					220					225
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala
				230					235					240
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly
				245					250					255
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly
				260					265					270
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly
				275					280					285
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys
				290					295					300
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu		
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<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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accctggctgg agccccccaga accatgtgcc gagccccgtc cttttggaga 250

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aaaacttaaa aaaaaaaaaaa aaaaa 725

<210> 99  
<211> 201  
<212> PRT  
<213> *Homo sapiens*

<400> 99

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				20					25					30
Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu
				35					40					45
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu
				50					55					60
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp
				65					70					.75
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys
				80					85					90
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val
				95					100					105
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly
				110					115					120
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln
				125					130					135
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu
				140					145					150
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val
				155					160					165
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala
				170					175					180
Asn	Arg	Pro	Lys	Val	Ser	Lys	Lys	Lys	Leu	Lys	Glu	Glu	Lys	Arg

185

190

195

Asn Lys Ser Lys Lys Lys  
200

<210> 100  
<211> 705  
<212> DNA  
<213> Homo sapiens  
  
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gaggctgggc tcgaaaaccga aagtcccgtc cggaccctcc aagtggagac 200  
cctggtgagccccagaac catgtgccga gcccgcgtct tttggagaca 250  
cgcttcacat acactacacg ggaagcttgg tagatggacg tattattgac 300  
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tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650  
gagaaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700  
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<210> 101  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 101  
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accctcttgt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200  
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gggccagcc ctcctggcc tcattggta tcacctatac agaaaggcca 450  
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<211> 1316  
<212> DNA  
<213> Homo sapiens

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gagggcttga gatgctcaga atgcattgac tggggggaaa agcgcaatac 200  
tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250  
tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300  
taccatgcct gtgggttat agcaaccata gccttcctaa tgattaatgc 350  
agtatcgaat ggacaagtcc gaggtgatag ttacagtcaa ggttgtctgg 400  
gtcaaacagg tgctcgcat tggctttcg ttggtttcat gttggcccttt 450  
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tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile  
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly  
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn  
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln  
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe  
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val  
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe  
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly  
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Arg Thr Glu Asp Leu Trp Gln  
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<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200

tggtggatta tcatacatgc agctgttatt tatccccacca tgaaagattt 250

caaccactca taccatgcct gtggtgttat agcaaccata gccttcctaa 300

tgattaatgc agtatacgaat ggacaagtcc gaggtgatag ttacagtcaa 350

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gttggcctt gatatctga ttgcatactat gtggattttt tttggagggtt 450  
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<211> 490  
<212> DNA  
<213> Homo sapiens

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<221> unsure  
<222> 31, 39, 108, 145, 179, 219, 412, 479  
<223> unknown base

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tttatcccac catgaaagat ttcaaccant cataccatgc ctgtgggtt 200  
atagcaacca tagccttcnt aatgattaat gcagttatcgat atggacaagt 250  
ccgaggtgat agttacagtg aaggttgtt gggtaaaca ggtgctcgca 300  
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atgtggattt ttttggagg ttatgttgc aaagaaaaag acatagtata 400  
ccctggaatt gntgtatTTT tccagaatgc cttcatctt tttggagggc 450  
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<210> 106  
<211> 466  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449  
<223> unknown base

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ggaaaagcgc aatantattt cttccattt ctgtgggtt actatTTTT 150  
acagggtggt ggattatcat agatgcagct gttatTTTC ccaccatgaa 200  
agatttnaac cactcatacc atgcctgtgg tggatagca accatagcct 250  
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<210> 107  
<211> 377  
<212> DNA  
<213> Homo sapiens

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<221> unsure  
<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356  
<223> unknown base

<400> 107  
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tgggtcaaac aggtgntngc atttggctt tngttggttt catgttggcc 300  
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taaagnaaaa gacatagtagt accctgt 377

<210> 108  
<211> 552  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 12, 25, 65, 130, 437, 537  
<223> unknown base

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ggactgacct gaaaaaaaaatg tttggattn tagagggctt gagatgctca 150  
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<210> 109  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
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<210> 110  
<211> 26  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
tggaaatca gatgtg 26

<210> 111  
<211> 46  
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<220>  
<223> Synthetic oligonucleotide probe

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<210> 112  
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<212> DNA  
<213> Homo sapiens

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ccgaatcctt tctccgaaga tgtcaaacgg ccccccagcgc ccctggtaac 150  
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<210> 113

<211> 610

<212> PRT

<213> Homo sapiens

<400> 113

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Asn	Pro	Phe	Ser	Glu	Asp	Val	Lys	Arg	Pro	Pro	Ala	Pro	Leu	Val
				35				40						45

Thr	Asp	Lys	Glu	Ala	Arg	Lys	Lys	Val	Leu	Lys	Gln	Ala	Phe	Ser
				50					55					60

Ala	Asn	Gln	Val	Pro	Glu	Lys	Leu	Asp	Val	Val	Val	Ile	Gly	Ser
				65					70					75

Gly	Phe	Gly	Gly	Leu	Ala	Ala	Ala	Ile	Leu	Ala	Lys	Ala	Gly	
				80				85						90

Lys	Arg	Val	Leu	Val	Leu	Glu	Gln	His	Thr	Lys	Ala	Gly	Gly	Cys
				95					100					105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile
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														115
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile
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														130
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser
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														145
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys
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														160
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu
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														175
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile
														185
														190
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu
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														205
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys
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														220
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln
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Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu
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Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro
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														265
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr
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Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala
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														295
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu
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Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys
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Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile
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Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr
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Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys
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														370
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val
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														385
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser
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														400
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met
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														415
														420

Glu Arg Tyr Val Ser Met Pro Arg Glu Glu Ala Ala Glu His Ile  
 425 430 435  
 Pro Leu Leu Phe Phe Ala Phe Pro Ser Ala Lys Asp Pro Thr Trp  
 440 445 450  
 Glu Asp Arg Phe Pro Gly Arg Ser Thr Met Ile Met Leu Ile Pro  
 455 460 465  
 Thr Ala Tyr Glu Trp Phe Glu Glu Trp Gln Ala Glu Leu Lys Gly  
 470 475 480  
 Lys Arg Gly Ser Asp Tyr Glu Thr Phe Lys Asn Ser Phe Val Glu  
 485 490 495  
 Ala Ser Met Ser Val Val Leu Lys Leu Phe Pro Gln Leu Glu Gly  
 500 505 510  
 Lys Val Glu Ser Val Thr Ala Gly Ser Pro Leu Thr Asn Gln Phe  
 515 520 525  
 Tyr Leu Ala Ala Pro Arg Gly Ala Cys Tyr Gly Ala Asp His Asp  
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 Leu Gly Arg Leu His Pro Cys Val Met Ala Ser Leu Arg Ala Gln  
 545 550 555  
 Ser Pro Ile Pro Asn Leu Tyr Leu Thr Gly Gln Asp Ile Phe Thr  
 560 565 570  
 Cys Gly Leu Val Gly Ala Leu Gln Gly Ala Leu Leu Cys Ser Ser  
 575 580 585  
 Ala Ile Leu Lys Arg Asn Leu Tyr Ser Asp Leu Lys Asn Leu Asp  
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 Ser Arg Ile Arg Ala Gln Lys Lys Lys Asn  
 605 610

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 <211> 1701  
 <212> DNA  
 <213> Homo sapiens

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<210> 115  
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<212> PRT  
<213> Homo sapiens

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35 40 45

Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe  
50 55 60

Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu  
65 70 75

Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
80 85 90

Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
95 100 105

Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly  
110 115 120

Thr Ala His Gly Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp  
125 130 135

Lys Glu Tyr Asp Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg  
140 145 150

Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp  
155 160 165

Gly Phe Cys Glu Thr Glu Glu Ala Ala Lys Arg Arg Gln Met  
170 175 180

Gln Glu Ala Glu Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn  
185 190 195

Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu  
200 205 210

Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg Val  
215 220 225

Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln  
230 235 240

Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro  
245 250 255

Lys Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly  
260 265 270

Val Asn Ser Ser Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly  
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Ala Leu Gly Gly Asn Leu Ile Ala His Met Val Leu Val Ser Arg  
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Leu

<210> 116

<211> 584

<212> DNA

<213> Homo sapiens

<400> 116

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<210> 117

<211> 123

<212> PRT

<213> Homo sapiens

<400> 117

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Phe	Pro	Gly	Gln	Val	Ala	Gln	Leu	Ser	Cys	Thr	Leu	Ser	Pro	Gln
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His	Val	Thr	Ile	Arg	Asp	Tyr	Gly	Val	Ser	Trp	Tyr	Gln	Gln	Arg
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Ala	Gly	Ser	Ala	Pro	Arg	Tyr	Leu	Leu	Tyr	Tyr	Arg	Ser	Glu	Glu
					65				70					75
Asp	His	His	Arg	Pro	Ala	Asp	Ile	Pro	Asp	Arg	Phe	Ser	Ala	Ala
					80				85					90
Lys	Asp	Glu	Ala	His	Asn	Ala	Cys	Val	Leu	Thr	Ile	Ser	Pro	Val
					95				100					105
Gln	Pro	Glu	Asp	Asp	Ala	Asp	Tyr	Tyr	Cys	Ser	Val	Gly	Tyr	Gly
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<210> 118

<211> 3402

<212> DNA

<213> Homo sapiens

<400> 118

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aa 3402

<210> 119  
<211> 504  
<212> PRT  
<213> Homo sapiens

<400> 119  
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35 40 45  
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50 55 60  
Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser  
65 70 75  
Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu  
80 85 90  
Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe  
95 100 105  
Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile  
110 115 120  
Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly  
125 130 135  
Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr  
140 145 150  
Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly  
155 160 165  
Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro  
170 175 180  
Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu  
185 190 195  
Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn  
200 205 210  
Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn  
215 220 225  
Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln  
230 235 240

Arg Thr Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn  
 245 250 255  
 Thr Thr Val Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val  
 260 265 270  
 Arg Ser Asp Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu  
 275 280 285  
 Tyr Gly Ala Glu Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly  
 290 295 300  
 Gln Lys Phe Val Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro  
 305 310 315  
 Asp Gly Ser Tyr Leu Asn Lys Leu Leu Ile Thr Arg Ala Arg Gln  
 320 325 330  
 Asp Asp Ala Gly Met Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly  
 335 340 345  
 Tyr Ser Phe Arg Ser Ala Phe Leu Thr Val Leu Pro Asp Pro Lys  
 350 355 360  
 Pro Pro Gly Pro Pro Val Ala Ser Ser Ser Ala Thr Ser Leu  
 365 370 375  
 Pro Trp Pro Val Val Ile Gly Ile Pro Ala Gly Ala Val Phe Ile  
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 Cys Thr Pro Ala Pro Ala Pro Pro Leu Pro Gly His Arg Pro Pro  
 410 415 420  
 Gly Thr Ala Arg Asp Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu  
 425 430 435  
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 Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr  
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 <213> Artificial Sequence

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 <223> Synthetic oligonucleotide probe

<400> 120

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210 <210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

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<210> 122

<211> 45

**<212>** DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

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Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys
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Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe
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Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp
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Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu
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Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr
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Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu
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Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val
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Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg
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Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys
									155		160			165
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu
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Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys
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Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly
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 230 235 240  
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 245 250 255  
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 260 265 270  
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 275 280 285  
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 290 295 300  
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 Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His  
 335 340 345  
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 350 355 360  
 Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe  
 365 370 375  
 Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala  
 380 385 390  
 Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val  
 395 400 405  
 Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn  
 410 415 420  
 Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys  
 425 430 435  
 Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala  
 440 445 450  
 Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile  
 455 460 465  
 Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys  
 470 475 480  
 Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg  
 485 490 495  
 Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val  
 500 505 510  
 Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr  
 515 520 525

Phe Thr Leu His Val Pro Gln Asp Thr Glu Arg Leu Val Leu Thr  
 530 535 540  
 Phe Val Asp Arg Leu Gln Lys Phe Val Asn Thr Thr Lys Val Leu  
 545 550 555  
 Pro Phe Asn Lys Lys Gly Ser Ala Val Phe His Glu Ile Lys Met  
 560 565 570  
 Leu Arg Arg Lys Glu Pro Ile Thr Leu Glu Ala Met Glu Thr Asn  
 575 580 585  
 Ile Ile Pro Leu Gly Glu Val Val Gly Glu Asp Pro Met Ala Glu  
 590 595 600  
 Leu Glu Ile Pro Ser Arg Ser Phe Tyr Arg Gln Asn Gly Glu Pro  
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 Tyr Ile Gly Lys Val Lys Ala Ser Val Thr Phe Leu Asp Pro Arg  
 620 625 630  
 Asn Ile Ser Thr Ala Thr Ala Ala Gln Thr Asp Leu Asn Phe Ile  
 635 640 645  
 Asn Asp Glu Gly Asp Thr Phe Pro Leu Arg Thr Tyr Gly Met Phe  
 650 655 660  
 Ser Val Asp Phe Arg Asp Glu Val Thr Ser Glu Pro Leu Asn Ala  
 665 670 675  
 Gly Lys Val Lys Val His Leu Asp Ser Thr Gln Val Lys Met Pro  
 680 685 690  
 Glu His Ile Ser Thr Val Lys Leu Trp Ser Leu Asn Pro Asp Thr  
 695 700 705  
 Gly Leu Trp Glu Glu Glu Gly Asp Phe Lys Phe Glu Asn Gln Arg  
 710 715 720  
 Arg Asn Lys Arg Glu Asp Arg Thr Phe Leu Val Gly Asn Leu Glu  
 725 730 735  
 Ile Arg Glu Arg Arg Leu Phe Asn Leu Asp Val Pro Glu Ser Arg  
 740 745 750  
 Arg Cys Phe Val Lys Val Arg Ala Tyr Arg Ser Glu Arg Phe Leu  
 755 760 765  
 Pro Ser Glu Gln Ile Gln Gly Val Val Ile Ser Val Ile Asn Leu  
 770 775 780  
 Glu Pro Arg Thr Gly Phe Leu Ser Asn Pro Arg Ala Trp Gly Arg  
 785 790 795  
 Phe Asp Ser Val Ile Thr Gly Pro Asn Gly Ala Cys Val Pro Ala  
 800 805 810  
 Phe Cys Asp Asp Gln Ser Pro Asp Ala Tyr Ser Ala Tyr Val Leu  
 815 820 825  
 Ala Ser Leu Ala Gly Glu Glu Leu Gln Ala Val Glu Ser Ser Pro  
 830 835 840

Lys Phe Asn Pro Asn Ala Ile Gly Val Pro Gln Pro Tyr Leu Asn  
 845 850 855  
 Lys Leu Asn Tyr Arg Arg Thr Asp His Glu Asp Pro Arg Val Lys  
 860 865 870  
 Lys Thr Ala Phe Gln Ile Ser Met Ala Lys Pro Arg Pro Asn Ser  
 875 880 885  
 Ala Glu Glu Ser Asn Gly Pro Ile Tyr Ala Phe Glu Asn Leu Arg  
 890 895 900  
 Ala Cys Glu Glu Ala Pro Pro Ser Ala Ala His Phe Arg Phe Tyr  
 905 910 915  
 Gln Ile Glu Gly Asp Arg Tyr Asp Tyr Asn Thr Val Pro Phe Asn  
 920 925 930  
 Glu Asp Asp Pro Met Ser Trp Thr Glu Asp Tyr Leu Ala Trp Trp  
 935 940 945  
 Pro Lys Pro Met Glu Phe Arg Ala Cys Tyr Ile Lys Val Lys Ile  
 950 955 960  
 Val Gly Pro Leu Glu Val Asn Val Arg Ser Arg Asn Met Gly Gly  
 965 970 975  
 Thr His Arg Arg Thr Val Gly Lys Leu Tyr Gly Ile Arg Asp Val  
 980 985 990  
 Arg Ser Thr Arg Asp Arg Asp Gln Pro Asn Val Ser Ala Ala Cys  
 995 1000 1005  
 Leu Glu Phe Lys Cys Ser Gly Met Leu Tyr Asp Gln Asp Arg Val  
 1010 1015 1020  
 Asp Arg Thr Leu Val Lys Val Ile Pro Gln Gly Ser Cys Arg Arg  
 1025 1030 1035  
 Ala Ser Val Asn Pro Met Leu His Glu Tyr Leu Val Asn His Leu  
 1040 1045 1050  
 Pro Leu Ala Val Asn Asn Asp Thr Ser Glu Tyr Thr Met Leu Ala  
 1055 1060 1065  
 Pro Leu Asp Pro Leu Gly His Asn Tyr Gly Ile Tyr Thr Val Thr  
 1070 1075 1080  
 Asp Gln Asp Pro Arg Thr Ala Lys Glu Ile Ala Leu Gly Arg Cys  
 1085 1090 1095  
 Phe Asp Gly Thr Ser Asp Gly Ser Ser Arg Ile Met Lys Ser Asn  
 1100 1105 1110  
 Val Gly Val Ala Leu Thr Phe Asn Cys Val Glu Arg Gln Val Gly  
 1115 1120 1125  
 Arg Gln Ser Ala Phe Gln Tyr Leu Gln Ser Thr Pro Ala Gln Ser  
 1130 1135 1140  
 Pro Ala Ala Gly Thr Val Gln Gly Arg Val Pro Ser Arg Arg Gln  
 1145 1150 1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala  
1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn  
1175 1180

<210> 125  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 125  
ctgggtgcctc aacagggagc ag 22

<210> 126  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 126  
ccatttgca ggtcaggta cag 23

<210> 127  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 127  
ctggagcaag tgctcagctg cctgtggta gactgggtc 40

<210> 128  
<211> 2819  
<212> DNA  
<213> Homo sapiens

<400> 128  
ctgcaagttt ttaacgccta acacacaagt atgttaggct tccaccaaag 50  
tcctcaatat acctgaatac gcacaatatac ttaactcttc atatttggtt 100  
ttgggatctg ctttgggtc ccatcttcat ttaaaaaaaaa atacagagac 150  
ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaaactaga 200  
caaagatcgc agatcataaa gcaagctctg ctttagttc caagaagatt 250  
acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300  
ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350  
attatgattt gtgttaagact cagattaca cggaagaagg gaaagtttgg 400  
gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500  
tctgtcaat gggcaatccc tacatgtgca ataatgagtg tgatgcgagt 550  
acccctgagc tggcacacccc ccctgagctg atgtttGatt ttgaaggaag 600  
acatccctcc acattttggc agtctgccac ttgaaaggag tatcccaagc 650  
ctctccaggt taacatcaact ctgtcttgg acaaaaccat tgagctaaca 700  
gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750  
ggagaagtct ctcgattatg gacgaacatg gcagccctat cagtattatg 800  
ccacagactg cttagatgct tttcacatgg atcctaaatc cgtgaaggat 850  
ttatcacagc atacggtctt agaaatcatt tgacacagaag agtactcaac 900  
agggtataca acaaatacgca aaataatcca ctttgaatc aaagacaggt 950  
tcgcgccttt tgctggacct cgccctacgca atatggcttc cctctacgga 1000  
cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050  
gaggataagg ctgttaagac cagccgttgg ggaaatattt gtagatgagc 1100  
tacacttggc acgctacttt tacgcgatct cagacataaa ggtgcgagga 1150  
aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200  
attgacatgc gaatgtgagc acaacactac aggtccagac tgtggaaat 1250  
gcaagaagaa ttatcagggc cgaccttggc gtccaggctc ctatctcccc 1300  
atccccaaag gcactgcaaa tacctgtatc cccagtattt ccagtattgg 1350  
tacgaatgtc tgcgacaacg agctcctgca ctgcccagaac ggagggacgt 1400  
gccacaacaa cgtgcgctgc ctgtgcccg ccgcatacac gggcatcctc 1450  
tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500  
ccagggcgcg ccccccacg gcacccacg gctgctgctg ctgaccacgc 1550  
tgctggaaac cggcagcccc ctggtgttct aggtgtcacc tccagccaca 1600  
ccggacgggc ctgtgcgtg gggaaagcaga cacaacccaa acatttgcta 1650  
ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700  
aactaagaag gcctaactga actaagccat atttattcacc cgtggacagc 1750  
acatccgagt caagactgtt aatttctgac tccagaggag ttggcagctg 1800  
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ttggaaaggc tgcgacagcc ccccaaacag gaaagacaaa aaacaaacaa 1900  
atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagtag 1950  
gactccgccc agtgtgtgga ccaaccaa atgattctt gctgtcaggt 2000  
gcattgtggg cataaggaaa tctgttacaa gctgccatat tggcctgctt 2050

ccgtccctga atcccttcca acctgtgott tagtgaacgt tgctctgtaa 2100  
ccctcggtgg ttgaaagatt tctttgtctg atgttagtga tgcacatgtg 2150  
taacagcccc ctctaaaagc gcaagccagt catacccctg tatatcttag 2200  
cagcactgag tccagtgcga gcacacaccc actatacaag agtggctata 2250  
gaaaaaaaaaaga aagtgtatct atccttttgtt attcaaatga agttattttt 2300  
cttgaactac tgtaatatgt agatTTTGT tattattgcc aatttgcgtt 2350  
accagacaat ctgttaatgt atctaattcg aatcagcaaa gactgacatt 2400  
ttatTTTgtc ctcttcgtt ctgtttgtt tcactgtgca gagatttctc 2450  
tgtaaggcga acgaacgtgc tggcatcaaa gaatatcagt ttacatata 2500  
aacaagtgt aataagattcc accaaaggac attctaaatg ttttcttgc 2550  
gctttaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600  
caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650  
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ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800  
aaaaaaaaaaa aaaaaaaaaa 2819

<210> 129  
<211> 438  
<212> PRT  
<213> Homo sapiens

<400> 129  
Met Tyr Leu Ser Arg Ser Leu Ser Ile His Ala Leu Trp Val Thr  
1 5 10 15  
Val Ser Ser Val Met Gln Pro Tyr Pro Leu Val Trp Gly His Tyr  
20 25 30  
Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp.  
35 40 45  
Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr  
50 55 60  
Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro  
65 70 75  
Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn  
80 85 90  
Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu  
95 100 105  
Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser  
110 115 120  
Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

125	130	135
Leu Ser Trp Ser Lys Thr Ile Glu Leu Thr Asp Asn Ile Val Ile		
140	145	150
Thr Phe Glu Ser Gly Arg Pro Asp Gln Met Ile Leu Glu Lys Ser		
155	160	165
Leu Asp Tyr Gly Arg Thr Trp Gln Pro Tyr Gln Tyr Tyr Ala Thr		
170	175	180
Asp Cys Leu Asp Ala Phe His Met Asp Pro Lys Ser Val Lys Asp		
185	190	195
Leu Ser Gln His Thr Val Leu Glu Ile Ile Cys Thr Glu Glu Tyr		
200	205	210
Ser Thr Gly Tyr Thr Thr Asn Ser Lys Ile Ile His Phe Glu Ile		
215	220	225
Lys Asp Arg Phe Ala Leu Phe Ala Gly Pro Arg Leu Arg Asn Met		
230	235	240
Ala Ser Leu Tyr Gly Gln Leu Asp Thr Thr Lys Lys Leu Arg Asp		
245	250	255
Phe Phe Thr Val Thr Asp Leu Arg Ile Arg Leu Leu Arg Pro Ala		
260	265	270
Val Gly Glu Ile Phe Val Asp Glu Leu His Leu Ala Arg Tyr Phe		
275	280	285
Tyr Ala Ile Ser Asp Ile Lys Val Arg Gly Arg Cys Lys Cys Asn		
290	295	300
Leu His Ala Thr Val Cys Val Tyr Asp Asn Ser Lys Leu Thr Cys		
305	310	315
Glu Cys Glu His Asn Thr Thr Gly Pro Asp Cys Gly Lys Cys Lys		
320	325	330
Lys Asn Tyr Gln Gly Arg Pro Trp Ser Pro Gly Ser Tyr Leu Pro		
335	340	345
Ile Pro Lys Gly Thr Ala Asn Thr Cys Ile Pro Ser Ile Ser Ser		
350	355	360
Ile Gly Thr Asn Val Cys Asp Asn Glu Leu Leu His Cys Gln Asn		
365	370	375
Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala		
380	385	390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly		
395	400	405
Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr		
410	415	420
Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro		
425	430	435
Leu Val Phe		

<210> 130  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 130  
tcgattatgg acgaacatgg cagc 24

<210> 131  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 131  
ttctgagatc cctcatccctc 20

<210> 132  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 132  
aggttcaggg acagcaagtt tggg 24

<210> 133  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 133  
tttgctggac ctcggctacg gaattggctt ccctctacgg acagctggat 50

<210> 134  
<211> 1493  
<212> DNA  
<213> Homo sapiens

<400> 134  
cccacgcgtc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50  
ctgaggaggc ggcgggttagc tggcaggcgc cgacttccga aggccgcgt 100  
ccgggcgagg tgtcctcatg acttcttgc tggaccatgt ccgtgatctt 150  
ttttgcctgc gtggtaacggg taaggatgg actgccccctc tcagcctcta 200  
ctgattttta ccacacccaa gatttttgg aatggaggag acggctcaag 250  
agttagct tgcgactggc ccagtatcca ggtcgagggtt ctgcagaagg 300

tttgtacttt agtatacatt tttcttcatt cggggacgtg gcctgcattg 350  
ctatctgctc ctgccagtgt ccagcagcca tggcctctg cttcctggag 400  
accctgtggt gggaaattcac agcttcctat gacactaccc gcattggcct 450  
agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaaag 500  
tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagctt 550  
aaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600  
ggaggacaca gatgtggcaa atgggggtat gaatggtcac acaccgatgc 650  
acttggagcc tgctcctaatttccgaatgg aaccagtgac agccctgggt 700  
atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750  
aggagttcac cttgcagaac attcttaca ggatccaagg agctggttct 800  
gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850  
gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900  
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ctggaaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000  
gctgttgcac acaagcgcct tttattttagg gtaaaattaa caaatccatt 1050  
ctattcctct gaccatgct tagtacatat gaccttaac cttacattt 1100  
atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150  
gatttgcattt cccaggattt tattttgttt aatgggcttt tctactaaaa 1200  
gcataaaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250  
tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300  
tcttgcataaca ataaatattt tgataaaata atgggtacat tttaacaaac 1350  
tcagtagtac aacctaaact tgtataaaaag tgtataaaaaa tgtatagcca 1400  
tttatatcct atgtataaaat taaatgaggt ggcttcagaa atggcagaat 1450  
aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135  
<211> 228  
<212> PRT  
<213> Homo sapiens

<400> 135  
Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly  
1 5 10 15  
Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe  
20 25 30  
Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala  
35 40 45

Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile  
                   50                     55                         60  
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser  
                   65                     70                         75  
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu  
                   80                     85                         90  
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu  
                   95                     100                        105  
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln  
                   110                    115                        120  
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu  
                   125                    130                        135  
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro  
                   140                    145                        150  
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met  
                   155                    160                        165  
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg  
                   170                    175                        180  
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn  
                   185                    190                        195  
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala  
                   200                    205                        210  
 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp  
                   215                    220                        225  
 Gln Thr Ser

<210> 136  
 <211> 239  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 39, 61, 143, 209  
 <223> unknown base

<400> 136  
 tgcttcctgg agaccctgtg gtggaaattc acagttcnt atgacactac 50  
 ctgcattggc ntagcctcca ggcatacgc ttttcttgag tttgacagca 100  
 tcattcagaa agtgaagtgg catttaact atgtaagttc ctntcagatg 150  
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200  
 gtttctcant atggaggaca cagatgtggc aaatggggt 239

<210> 137  
 <211> 2300  
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttccctcgta gcgagcctag tggcgggtgt ttgcattgaa 50  
acgtgagcgc gacccgacct taaagagtgg ggagcaagg gaggacagag 100  
ccctttaaaa cgaggcgggt ggtgcctgcc ccttaaggg cggggcgtcc 150  
ggacgactgt atctgagccc cagactgccc cgagttctg tcgcaggctg 200  
cgagggaaagg cccctaggct gggtctgggt gcttggcggc ggcggctcc 250  
tccccgctcg tcctccccgg gcccagaggc acctcggctt cagtcatgct 300  
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350  
gctattccac gagaggatcc gcgagtgtat tatacaaca cttctgtttg 400  
caacactgta catcctctgc cacatcttcc tgacccgctt caagaaggct 450  
gctgagttca ccacagtggta tgatgaagat gccaccgtca acaagatgc 500  
gctcgagctg tgcacccctta ccctggcaat tgccctgggt gctgtcctgc 550  
tcctgccctt ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600  
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650  
ccttgaaaaa ctatccccca acctgtccct catcttcctc atgccctttg 700  
catatttctt cactgagtct gagggctttg ctggctccag aaagggtgtc 750  
ctggggccggg tctatgagac agtggtgatg ttgatgctcc tcactctgct 800  
ggtgcttaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850  
ccaacagaga gtcactctat gactttggg agtactatct cccctacctc 900  
tactcatgca ttccttcct tggggttctg ctgctcctgg tgtgtactcc 950  
actgggtctc gcccgcattgt tctccgtcac tggaaagctg ctatgtcaagc 1000  
ccoggctgtc ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050  
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ggctacccccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250  
gctcattgtg gccatccaca tcctggagct gctcatcgat gaggctgcca 1300  
tgccccgagg catgcagggt acctccttag gccaggcttc cttctccaag 1350  
ctgggctcct ttggtgccgt cattcagggt gtactcatct tttacctaatt 1400  
ggtgtcctca gttgtggct tctatagctc tccactcttc cggagcctgc 1450  
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gcaatttcta cattgtgttc ctctacaacg cagccttgc aggccctcacc 1650  
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aggcatctag gaagacccag caccagtgac ctccagctgg gggtgggaag 1800  
aaaaaaaactg gacactgcca tctgctgcct aggccctggag ggaagccaa 1850  
ggctacttgg acctcaggac ctggaatctg agagggtggg tggcagaggg 1900  
gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950  
ggacctcctg cttttccata cttaactgtg gcctcagcat ggggttagggc 2000  
tgggtgactg ggtctagccc ctgatccaa atctgtttac acatcaatct 2050  
gcctcaactgc tgttctggc catccccata gccatgttta catgatttga 2100  
tgtgcaatag ggtgggtag gggcagggaa aggactggc cagggcagggc 2150  
tcgggagata gattgtctcc ctgcctctg gcccagcaga gcctaagcac 2200  
tgtgctatcc tggaggggct ttggaccacc tcaaagacca aggggatagg 2250  
gaggaggagg cttagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu  
1 5 10 15

Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe  
20 25 30

Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys  
35 40 45

Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val  
50 55 60

Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala  
65 70 75

Leu Gly Ala Val Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu  
80 85 90

Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn  
95 100 105

Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro  
110 115 120

Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

125	130	135
Glu Ser Glu Gly Phe Ala Gly Ser Arg Lys	Gly Val Leu Gly Arg	
140	145	150
Val Tyr Glu Thr Val Val Met Leu Met	Leu Leu Thr Leu Leu Val	
155	160	165
Leu Gly Met Val Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys	
170	175	180
Ala Asn Arg Glu Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro	
185	190	195
Tyr Leu Tyr Ser Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu	
200	205	210
Val Cys Thr Pro Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly	
215	220	225
Lys Leu Leu Val Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln	
230	235	240
Leu Tyr Cys Ser Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile	
245	250	255
Cys Asn Pro Thr Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu	
260	265	270
His Arg Gln Val Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu	
275	280	285
Lys Arg Arg Lys Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro	
290	295	300
Leu Ala Met Leu Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu	
305	310	315
Ile Val Ala Ile His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala	
320	325	330
Met Pro Arg Gly Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe	
335	340	345
Ser Lys Leu Gly Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile	
350	355	360
Phe Tyr Leu Met Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro	
365	370	375
Leu Phe Arg Ser Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr	
380	385	390
Gln Ile Ile Gly Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala	
395	400	405
Leu Pro Val Phe Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu	
410	415	420
Leu Gly Asp Phe Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile	
425	430	435
Val Phe Leu Tyr Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys	

440

445

450

Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg  
455 460 465

Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro  
470 475 480

Gln Ala Ser Arg Lys Thr Gln His Gln  
485

<210> 139

<211> 294

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 53, 57

<223> unknown base

<400> 139

ggctgccgag ggaaggcccc ttgggttggc cttgggttgct tggcgccggc 50

ggnttcntcc ccgcgtcgcc tccccgggcc cagaggcacc tcggcttcag 100

tcatgctgag cagagtatgg aagcacctga ctacgaagtgc ctatccgtgc 150

gagaacagct attccacgag aggatccgcg agtgtattat atcaacactt 200

ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250

gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140

<211> 526

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 197, 349

<223> unknown base

<400> 140

gaccgacctt aaagagtggg agcaaaggaa ggacagagcc ttttaaaacg 50

aggcggtggc gcctgccctt taagggcgcc gcttccggac gactgttatct 100

gagccccaga ctgccccgag tttctgtcg aggctgcgag gaaaggcccc 150

taggctgggt ctggtgcttg gcggcgccgg cttcctcccc gttgtcntcc 200

ccggggcccaag aggcacctcg gcttcagtca tgctgagcag agtatggaaag 250

cacctgacta cgaagtgcata tccgtgcgag aacagctatt ccacgagagg 300

atcccgcgagt gtattatatac aacacttctg tttgcaacac tgtacatcnt 350

ctgccacatc ttcctgaccc gcttcaagaa gcctgctgag ttccaccacag 400

tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccctgg caattgcctt gggtgctgtc ctgctctgc ccttctccat 500  
catcagcaat gaggtgctgc actccc 526

<210> 141  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 141  
gactgtatct gagccccaga ctgc 24

<210> 142  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 142  
tcagcaatga ggtgctgctc 20

<210> 143  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
tgaggaagat gagggacagg ttgg 24

<210> 144  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 144  
tatggaagca cctgactacg aagtgctatc cgtgcgagaa cagctattcc 50

<210> 145  
<211> 685  
<212> DNA  
<213> Homo sapiens

<400> 145  
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgt aagatcaagtc 50  
caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100  
tggtccaggt cttcatgctg ctgtgggtga tattactggc cctggctcct 150  
gtcagtggac agtttgcaag gacacccagg cccattatcc tcctccagcc 200  
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtagcca tcggtagacct 300  
gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
atctggagag tacagatgcc aggcccaggc ctccctctc agtagccctg 400  
tgcacttgaa tttttttca gagatggat ttccatgc tgcccaggct 450  
aatgttgaac tcctgggctc aagtgtatcg ctcacctagg cctctcaaag 500  
cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550  
aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaaacactg 600  
aataatacta tttacaagaa tgataatgtc ctggcattcc ttaataaaaag 650  
aactgacttc caaaaaaaaaaaaaaaa 685

<210> 146  
<211> 124  
<212> PRT  
<213> Homo sapiens

<400> 146

Met	Leu	Leu	Trp	Val	Ile	Leu	Leu	Val	Leu	Ala	Pro	Val	Ser	Gly
1				5				10				15		
Gln	Phe	Ala	Arg	Thr	Pro	Arg	Pro	Ile	Ile	Phe	Leu	Gln	Pro	Pro
				20					25			30		
Trp	Thr	Thr	Val	Phe	Gln	Gly	Glu	Arg	Val	Thr	Leu	Thr	Cys	Lys
			35				40					45		
Gly	Phe	Arg	Phe	Tyr	Ser	Pro	Gln	Lys	Thr	Lys	Trp	Tyr	His	Arg
			50					55				60		
Tyr	Leu	Gly	Lys	Glu	Ile	Leu	Arg	Glu	Thr	Pro	Asp	Asn	Ile	Leu
			65					70				75		
Glu	Val	Gln	Glu	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Ala	Gln	Gly	Ser
			80					85				90		
Pro	Leu	Ser	Ser	Pro	Val	His	Leu	Asp	Phe	Ser	Ser	Glu	Met	Gly
			95					100				105		
Phe	Pro	His	Ala	Ala	Gln	Ala	Asn	Val	Glu	Leu	Leu	Gly	Ser	Ser
			110					115				120		
Asp	Leu	Leu	Thr											

<210> 147  
<211> 1621  
<212> DNA  
<213> Homo sapiens

<400> 147

cagaagaggg ggcttagctag ctgtctctgc ggaccaggga gaccccccgcg 50  
cccccccggt gtgaggcggc ctcacaggc cgggtggct ggcgagccga 100  
cgcggcggcg gaggaggctg tgaggagtgt gtggAACAGG acccgggaca 150

DNA sequence

gaggaaccat ggctccgcag aacctgagca cctttgcct gttgctgcta 200  
tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250  
ggtcgcctcga agtgcctcta taaaggatat taaaaaggcc tataggaaac 300  
tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
gagaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450  
atcagagctc ccatggagac atttttcac acttcttgg ggatttttgt 500  
ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
aagtgatatt attgttagatc tagaagtac tttggaagaa gtatatgcag 600  
gaaattttgt ggaagtagtt agaaacaac ctgtggcaag gcaggctcct 650  
ggcaaacgga agtcaattg tcggcaagag atgcggacca cccagctggg 700  
ccctgggcgc ttccaaatga cccaggaggt ggtctgcgcac gaatgcccta 750  
atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800  
gggtgagag acggcatgga gtacccttt attggagaag gtgagcctca 850  
cgtggatggg gacgcctggag atttacggtt ccgaatcaaa gttgtcaagc 900  
acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
tcatttagtt agtcactggt tggcttgag atggatatta ctcacttgga 1000  
tggtcacaag gtacatattt cccggataa gatcaccagg ccaggagcga 1050  
agctatggaa gaaaggggaa gggctccccca actttgacaa caacaatatc 1100  
aagggtcttt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150  
aacagagggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200  
tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250  
gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggttt 1300  
ttttgtgtgt gttttgttt ttatccaa tatgcaagtt aggcttaatt 1350  
tttttatcta atgatcatca tgaaatgaat aagagggctt aagaatttgt 1400  
ccatttgcat tcggaaaaga atgaccagca aaaggttac taataccct 1450  
ccctttgggg atttaatgtc tggtgctgcc gcctgagttt caagaattaa 1500  
agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550  
gttggtagca atttcattca aaatgccaac tggagaagtc tgtttttaaa 1600  
tacattttgt tgttatccaa a 1621

<210> 148  
<211> 358  
<212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
		20							25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
					50				55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
					65				70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
					80				85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
					95				100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
					110				115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
					125				130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
					140				145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
					155				160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
					170				175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
					185				190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
					200				205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
					215				220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
					230				235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
					245				250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
					260				265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
					275				280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
					290				295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys  
305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln  
320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln  
335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr  
350 355

<210> 149  
<211> 509  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,  
482  
<223> unknown base

<400> 149  
tgggaccagg gaaccccgaa ccccccgtg gagngcctaa caggccgtg 50  
gntgcgaccc aagcggcgaa cggaggaggt tttgaggatt tttggaacag 100  
gaccggaca gaggaaccat gttccgcag aacntgagca cttttgcct 150  
gttgnntgta tacttcatcg gggcggtgat tgccggacga gattttata 200  
agattttggg gtgcctngaa gtgcctnta taaaaggatataaaaaaggcc 250  
tatagggaaac tagccctgca gntttatccc gaccggaaacc ctgatgatcc 300  
acaagccccag gagaaattcc aggatttggg tgctgcttat gaggtntgt 350  
cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400  
aaagatggtn atcagagctc ccatggagac atttttcac acttntttgg 450  
ggattttgggt ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500  
ttccaagag 509

<210> 150  
<211> 1532  
<212> DNA  
<213> Homo sapiens

<400> 150  
ggcacgaggc ggccgggcag tcgcggatg cgcccgagg ccacagcctg 50  
aggccctcag gtctctgcag gtgtcgtgaa ggaaccttagc acctgccatc 100  
ctcttccca atttgcact tccagcagct ttagcccatg aggaggatgt 150  
gaccggact gagtcaggag ccctctggaa gcatggagac tgtggtgatt 200  
gttgcctatag gtgtgctggc caccatctt ctggcttcgt ttgcagcctt 250  
ggtgctgggt tgcaggcagc gctactgccc gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggaccta ttgggccat ggagaccag 350  
tctgagccct ctgagttaga actggacgat gtcgttatca ccaacccca 400  
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggc 450  
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500  
aagcttgttgc ccatgacaat gggctctggg gccaaagatga agacttcagc 550  
cagtgtcagc gacatcatttgg tggggccaa gcggatcagc cccagggtgg 600  
atgatgttgttgc aagtcgatg taccctccgt tggaccccaa actcctggac 650  
gcacggacga ctgccttgct cctgtctgtc agtcacctgg tgctggac 700  
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800  
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
gtctgcaatt tagtgcctac aggccagcag ctagccatga agggccctgc 900  
cgccatccct gnatggctca gcttagcatttgc ctacttttc ctatagagtt 950  
agttgttctc cacggcttggg gagttcagct gtgtgtgcatt agtaaagcag 1000  
gagatcccccg tcagtttatg cctcttttc agttgcaaac tgtggctgg 1050  
gagtggcagt ctaatactac agttaggggaa gatgccatttgc actctctgca 1100  
agaggagtat tgaaaactgg tggactgtca gctttatita gctcacctag 1150  
tgaaaaatggcc tctctcgatc ggtcagaatgt tggtggcaatt 1200  
taaaattaga atttctggcc tctctcgatc ggtcagaatgt tggtggcaatt 1250  
ctgatctgca ttttcagaag aggacaatca attgaaaacta agtaggggaa 1300  
tcttcttttgc gcaagacttg tactctctca cctggcctgt ttcattttatt 1350  
tgtattatct gcctggccc tgaggcgtct gggctctcc tctccctgc 1400  
aggtttgggt ttgaagctga ggaactacaa agttgatgtat ttctttttta 1450  
tctttatgcc tgcaatttttgc cctagctacc actaggtggaa tagtaaattt 1500  
atacttatgt ttccctcaaa aaaaaaaaaaa aa 1532

<210> 151  
<211> 226  
<212> PRT  
<213> Homo sapiens

<400> 151  
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
1 5 10 15  
Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
20 25 30  
Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

35	40	45
Ile Val Asp Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu		
65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu		
80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr		
95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys		
110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile		
125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu		
140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser		
155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr		
170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu		
185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp		
200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala		
215	220	225

Ile

<210> 152  
<211> 1027  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1017, 1020  
<223> unknown base

<400> 152  
gcttcatttc tcccgactca gcttcccacc ctgggctttc cgaggtgctt 50  
tcggccgtgt cccccaccact gcagccatga tctccttaac ggacacgcag 100  
aaaattggaa tgggattaac aggatttggaa gtgttttcc tgttcttgg 150  
aatgattctc tttttgaca aagcactact ggctatttggaa aatgttttat 200  
tttgtagccgg cttggctttt gtaattgggtt tagaaagaac attcagattc 250  
ttcttccaaa aacataaaat gaaagctaca ggttttttc tgggtggtgt 300

atttgtagtc cttattgggtt ggcctttgat aggcataatc ttcgaaattt 350  
atggattttt tctcttggttcc agggggcttct ttccctgtcggt tggtggcttt 400  
attagaagag tgccagtcct tggatccctc ctaaatttac ctgaaatttag 450  
atcatttgcata gataaaggaa gagaaagcaa caaatatggta taacaacaag 500  
tgaatttgcata gactcatttca aaatattgtt ttatttataa agtcatttgcata 550  
agaatattca gcacaaaattt aaattacatg aaatagcttgcata taatgttctt 600  
tacaggagtt taaaacgttat agcctacaaa gtaccagcag caaatttagca 650  
aagaaggcgt gaaaacaggc ttctactcaa gtgaactaag aagaagttag 700  
caagcaaact gagagaggtaa aatccatgt taatgtatgtt taagaaactc 750  
ttgaaggcta tttgtgttgtt tttccacaa tgtgcgaaac tcagccatcc 800  
tttagagaact gtgggtgcctg tttctttct ttttattttg aaggctcagg 850  
agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900  
tatttccagt tgcactgttat ctctggaaat gatgcattgaa ttgcatttgcatt 950  
ttgtgtcatt ttaaagtattt aaaaaccaagg aaaccccaat tttgtatgttat 1000  
ggattacttt ttttngcn cagggcc 1027

<210> 153

<211> 138

<212> PRT

<213> Homo sapiens

<220>

<221> N-myristoylation Sites

<222> 11-16, 51-56 and 116-121

<223> N-myristoylation Sites.

<220>

<221> Transmembrane domains

<222> 12-30, 33-52, 69-89 and 93-109

<223> Transmembrane domains

<220>

<221> Aminoacyl-transfer RNA Synthetases.

<222> 49-59

<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153

Met	Ile	Ser	Leu	Thr	Asp	Thr	Gln	Lys	Ile	Gly	Met	Gly	Leu	Thr
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Gly	Phe	Gly	Val	Phe	Phe	Leu	Phe	Phe	Gly	Met	Ile	Leu	Phe	Phe
			20						25				30	

Asp	Lys	Ala	Leu	Leu	Ala	Ile	Gly	Asn	Val	Leu	Phe	Val	Ala	Gly
				35				40					45	

Leu	Ala	Phe	Val	Ile	Gly	Leu	Glu	Arg	Thr	Phe	Arg	Phe	Phe	Phe
			50					55					60	

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val  
65 70 75

Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu  
80 85 90

Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val  
95 100 105

Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn  
110 115 120

Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn  
125 130 135

Asn Met Val

<210> 154  
<211> 405  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 66  
<223> unknown base

<400> 154  
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actcagcttc ccaccntggg ctttccgagg tgctttcgcc gctgtccccca 100  
ccactgcagc catgatctcc ttaacggaca cgcaaaaaat tggaatggga 150  
ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200  
tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250  
cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300  
aaaatgaaag ctacaggttt tttctgggt ggtgtatttg tagtccttat 350  
tggttggcct ttgataggca tgatcttcga aatttatgga tttttctct 400  
tgttc 405

<210> 155  
<211> 1781  
<212> DNA  
<213> Homo sapiens

<400> 155  
ggcacgaggc tgaacccagc cggctccatc tcagcttctg gtttctaagt 50  
ccatgtgccca aaggctgccca ggaaggagac gccttcctga gtccctggatc 100  
tttcttcctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150  
aagagcgtcc acgcatcatg gacctcgcgg gactgctgaa gtctcagttc 200  
ctgtgccacc tggtcttctg ctacgtctt attgcctcag ggctaattcat 250

caacaccatt cagctttca ctctcctcct ctggccatt aacaaggcgc 300  
tcttcggaa gatcaactgc agactgtctt attgcacatc aagccagctg 350  
gtgatgctgc tggagtggtg gtcgggcacg gaatgcacca tcttcacgga 400  
cccgccgcgcc tacctaagt atgggaagga aaatgcacatc gtggttctca 450  
accacaagtt tgaaatttgcac ttctgtgtg gctggagcct gtccgaacgc 500  
tttgggctgt tagggggctc caaggtcctg gccaaagaaag agctggccta 550  
tgtcccaatt atcggcttgcga tgtggtaactt caccgagatg gtcttctgtt 600  
cgcgcaagtgg gtagcaggat cgcaagacgg ttgcacccag tttgcagcac 650  
ctccggact accccgagaa gtatTTTTC ctgattcaact gtgagggcac 700  
acggttcactc gagaagaagc atgagatcag catgcaggtg gcccgggcca 750  
aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800  
gccatcaccg tgaggagctt gagaaatgta gttcagctg tatatgactg 850  
tacactcaat ttccaaaata atgaaaatcc aacactgctg ggagtcccaa 900  
acggaaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950  
gacatccctg aagacgatga cgagtgcctg gcctggctgc acaagctcta 1000  
ccaggagaag gatgcctttc aggaggagta ctacaggacg ggcaccccttc 1050  
cagagacgcc catggtgcgc cccggcgcc cctggaccct cgtgaactgg 1100  
ctgttttggc cctcgctggt gctctaccct ttcttccagt tcctggtcag 1150  
catgatcagg agcgggtctt ccctgacgct ggccagcttc atcctcgct 1200  
tctttgtggc ctccgtggga gttcgatgga tgattgggtg gacggaaatt 1250  
gacaagggtctg ctgcctacgg caactctgac agcaaggcaga aactgaatga 1300  
ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350  
cctctgcata tcctcccttag tgggacacgg tgacaaaggc tgggtgagcc 1400  
cctgctggc acggcgaaag tcacgaccc tcacgaccagg gagtctggc 1450  
tcaaggccgg atggggagga agatgtttttaatctttt ttccccatgt 1500  
gcttttagtgg gctttgggtt tcttttggc cgagtgtgtg tgagaatggc 1550  
tgtgtggta gtgtgaactt tggtctgtga tcatagaaag ggtatTTTGA 1600  
gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650  
atcctttggc gctgagttt ctgttaaccct tgggtgccag agataaagtg 1700  
aaaagtgcctt taggtgagat gactaaatta tgcctccaag aaaaaaaaaat 1750  
taaagtgcctt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378  
<212> PRT  
<213> Homo sapiens

<400> 156  
Met Asp Leu Ala Gly Leu Leu Lys Ser Gln Phe Leu Cys His Leu  
1 5 10 15  
Val Phe Cys Tyr Val Phe Ile Ala Ser Gly Leu Ile Ile Asn Thr  
20 25 30  
Ile Gln Leu Phe Thr Leu Leu Trp Pro Ile Asn Lys Gln Leu  
35 40 45  
Phe Arg Lys Ile Asn Cys Arg Leu Ser Tyr Cys Ile Ser Ser Gln  
50 55 60  
Leu Val Met Leu Leu Glu Trp Trp Ser Gly Thr Glu Cys Thr Ile  
65 70 75  
Phe Thr Asp Pro Arg Ala Tyr Leu Lys Tyr Gly Lys Glu Asn Ala  
80 85 90  
Ile Val Val Leu Asn His Lys Phe Glu Ile Asp Phe Leu Cys Gly  
95 100 105  
Trp Ser Leu Ser Glu Arg Phe Gly Leu Leu Gly Gly Ser Lys Val  
110 115 120  
Leu Ala Lys Lys Glu Leu Ala Tyr Val Pro Ile Ile Gly Trp Met  
125 130 135  
Trp Tyr Phe Thr Glu Met Val Phe Cys Ser Arg Lys Trp Glu Gln  
140 145 150  
Asp Arg Lys Thr Val Ala Thr Ser Leu Gln His Leu Arg Asp Tyr  
155 160 165  
Pro Glu Lys Tyr Phe Phe Leu Ile His Cys Glu Gly Thr Arg Phe  
170 175 180  
Thr Glu Lys Lys His Glu Ile Ser Met Gln Val Ala Arg Ala Lys  
185 190 195  
Gly Leu Pro Arg Leu Lys His His Leu Leu Pro Arg Thr Lys Gly  
200 205 210  
Phe Ala Ile Thr Val Arg Ser Leu Arg Asn Val Val Ser Ala Val  
215 220 225  
Tyr Asp Cys Thr Leu Asn Phe Arg Asn Asn Glu Asn Pro Thr Leu  
230 235 240  
Leu Gly Val Leu Asn Gly Lys Lys Tyr His Ala Asp Leu Tyr Val  
245 250 255  
Arg Arg Ile Pro Leu Glu Asp Ile Pro Glu Asp Asp Asp Glu Cys  
260 265 270  
Ser Ala Trp Leu His Lys Leu Tyr Gln Glu Lys Asp Ala Phe Gln  
275 280 285  
Glu Glu Tyr Tyr Arg Thr Gly Thr Phe Pro Glu Thr Pro Met Val

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala		
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys		
365	370	375

Leu Asn Asp

<210> 157  
<211> 1849  
<212> DNA  
<213> Homo sapiens

<400> 157  
ctgaggcgcc ggttagcatgg agggggagag tacgtcggcg gtgctctcg 50  
gctttgtgct cggcgcaactc gcttccagc acctcaacac ggactcggac 100  
acggaagggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150  
tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200  
agaaatatata tccatgctat cagctttta gctttataa ttcttcaggc 250  
gaagtaaatg agcaagcaat gaagaaaata ttatcaaatg tcaaaaagaa 300  
tgtggtaggt tggtacaaat tccgtcgtca ttcagatcag atcatgacgt 350  
ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaaccaa 400  
gaccttgttt ttctgctatt aacaccaatg ataataacag aaagctgctc 450  
tactcatcga ctggaacatt ccttatataa acctcaaaaa ggacttttc 500  
acagggtacc ttttagtggtt gccaatctgg gcatgtctga acaactgggt 550  
tataaaaactg tatcaggttc ctgtatgtcc actggttta gccgagcagt 600  
acaaacacac agctctaaat ttttgaaga agatggatcc ttaaaggagg 650  
tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700  
atatgcaaaa aagtggaaaga cagtgaacaa gcagtagata aactagtaaa 750  
ggatgtaaac agataaaac gagaaattga gaaaaggaga ggagcacaga 800  
ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850  
tttcttgc aggcattacg gacctttttt ccaaattctg aatttcttca 900  
ttcatgtgtt atgtcttaa aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccatctcgat gtagtagaca atctgaccc tt 1000  
cacactgaca ttccctgaagc tagtccagct agtacaccac aaatcattaa 1050  
gcataaaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100  
tgtagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150  
caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200  
aaagatgaag ggttttggtg aatattcacg gtctcctaca ttttgatcct 1250  
ttaaacctta caaggagatt tttttattt gctgatgggt aaagccaaac 1300  
atttctattt ttttactat gttgagctac ttgcagtaag ttcatttgg 1350  
tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcat 1400  
ttacttcaca aagtactttt tcaaacatca gatgctttt tttccaaacc 1450  
ttttttcac ct当地actaa gttgttgggg ggaaggctta cacagacaca 1500  
tc当地tagaa ttggaaaagt gagaccaggc acagtggtc acacctgtaa 1550  
tcccagcact taggaagac aagtcaggag gattgattga agcttaggagt 1600  
tagagaccag cctggcaac gtattgagac catgtctatt aaaaaataaa 1650  
atggaaaagc aagaatagcc ttat当地caa aatatggaaa gaaatttata 1700  
tgaaaattt tctgagtc当地 taaaatttctc ct当地agtgtt acttttttag 1750  
aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800  
aaatttgcaa aacatcatct aaaatttaaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu  
1 5 10 15

Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu  
20 25 30

Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile  
35 40 45

Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
50 55 60

Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
65 70 75

Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
80 85 90

Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
95 100 105

Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn  
                   110                  115                  120  
 Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu  
                   125                  130                  135  
 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu  
                   140                  145                  150  
 His Ser Leu Tyr Lys Pro Gln Lys Gly Leu Phe His Arg Val Pro  
                   155                  160                  165  
 Leu Val Val Ala Asn Leu Gly Met Ser Glu Gln Leu Gly Tyr Lys  
                   170                  175                  180  
 Thr Val Ser Gly Ser Cys Met Ser Thr Gly Phe Ser Arg Ala Val  
                   185                  190                  195  
 Gln Thr His Ser Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys  
                   200                  205                  210  
 Glu Val His Lys Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu  
                   215                  220                  225  
 Leu Lys Ser Ile Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val  
                   230                  235                  240  
 Asp Lys Leu Val Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu  
                   245                  250                  255  
 Lys Arg Arg Gly Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile  
                   260                  265                  270  
 Gln Lys Asp Pro Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg  
                   275                  280                  285  
 Thr Phe Phe Pro Asn Ser Glu Phe Leu His Ser Cys Val Met Ser  
                   290                  295                  300  
 Leu Lys Asn Arg His Val Ser Lys Ser Ser Cys Asn Tyr Asn His  
                   305                  310                  315  
 His Leu Asp Val Val Asp Asn Leu Thr Leu Met Val Glu His Thr  
                   320                  325                  330  
 Asp Ile Pro Glu Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys  
                   335                  340                  345  
 His Lys Ala Leu Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Ser  
                   350                  355                  360  
 Arg Leu Leu Asp Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly  
                   365                  370                  375  
 Ser Ser Asn Gln Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr  
                   380                  385                  390  
 Asp Glu Glu Ile Glu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg  
                   395                  400                  405  
 Ser Pro Thr Phe

<210> 159  
<211> 2651  
<212> DNA  
<213> Homo sapiens

<400> 159  
gacacagccg cgccggcggag ggcagagtca gccgagccga gtccagccgg 50  
acgagcggac cagcgccagg cagcccaagc agcgcgcagc gaacgcccgc 100  
cgccgccccac accctctgcg gtcccccgcgg cgcctgccac cttccctcc 150  
ttccccgcgt ccccgccctcg ccggccagtc agcttgccgg gttcgctgcc 200  
ccgcgaaacc ccgaggtcac cagccgcgc ctctgcttcc ctggggccgc 250  
cgccgcctcc acgccttcct tctccctgg cccggcgcct ggcaccgggg 300  
accgttgccct gacgcgaggc ccagctctac ttttcgcctcc gcgtctctc 350  
cgccctgctcg cctcttccac caactccaac tccttctccc tccagctcca 400  
ctcgctagtc cccgactccg ccagccctcg gcccgcgtgcc gtagcgccgc 450  
ttcccgtccg gtcccaaagg tgggaacgcg tccgccccgg cccgcaccat 500  
ggcacggttc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550  
ccgcgctgct ggctgccgag ctcaagtgcg aaagttgctc ggaagtgcga 600  
cgtcttacg tgtccaaagg cttcaacaag aacgatgccc ccctccacga 650  
gtcaacggt gatcattga agatctgtcc ccagggttct acctgctgct 700  
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750  
agtgtggtca gcaaacagtg caatcatttgc caagctgtct ttgcttcacg 800  
ttacaagaag tttgatgaat tcttcaaaga actacttgcgaa aatgcagaga 850  
aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
aattctgagc tatttaaaga tctcttcgtt gagttgaaac gttactacgt 950  
gttggaaat gtgaacctgg aagaaatgtt aaatgacttc tgggctcgcc 1000  
tcctggagcg gatgttccgc ctgggtact cccagttacca ctttacagat 1050  
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100  
agatgtccct cgcaaattga agctccaggt tactcgtgt tttgttagcag 1150  
cccgtacttt cgctcaaggc ttagcggttg cgggagatgt cgtgagcaag 1200  
gtctccgtgg taaacccac agcccagtgt acccatgccc tggtaagat 1250  
gatctactgc tcccactgcc ggggtctcgactgtgaag ccatgttaca 1300  
actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350  
gattttgaat ggaacaattt catagatgtt atgctgatgg tggcagagag 1400  
gctagagggc ctttcaaca ttgaatcggt catggatccc atcgatgtga 1450

agatttctga tgcttattatg aacatgcagg ataatagtgt tcaagtgtct 1500  
cagaagggtt tccagggatg tggacccccc aagccccctcc cagctggacg 1550  
aatttcttgt tccatctctg aaagtgcctt cagtgcgc ttcagaccac 1600  
atcaccccgaa ggaacgccc accacagcag ctggcaactag tttggaccga 1650  
ctggttactg atgtcaagga gaaactgaaa cagggcaaga aattctggtc 1700  
ctcccttcccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750  
gcaatgagga tgactgttgg aatggaaag gcaaaagcag gtacctgttt 1800  
gcagtgcacag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850  
ggttgacacc agcaaaccag acatactgat cttcgtcaa atcatggctc 1900  
ttcgagtgtat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950  
gacttcttgc atatcagtga tgaaagttagt ggagaaggaa gtggaaagtgg 2000  
ctgtgagttat cagcagtgcc cttagagtt tgactacaat gccactgacc 2050  
atgctggaa gagtgccaat gagaaagccg acagtgtgg tgtccgtcct 2100  
ggggcacagg cttacccctt cactgtcttc tgcatcttgc ttctggttat 2150  
gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200  
aaagttaaaa ggcaccagtt atcactttt taccatccta gtgactttgc 2250  
tttttaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300  
tttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaaggg 2350  
actgtgcatt gagttggcct ctgctccccc aaaccatgtt aaacgtggct 2400  
aacagtgttagt gtacagaact atagtttagtt gtgcattgt gattttatca 2450  
ctctattatt tgtttgtatg ttttttctc atttcgtttg tgggtttttt 2500  
tttccaaactg tgatctcgcc ttgtttctta caagcaaacc agggccctt 2550  
cttggcactt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600  
agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gccccaaaaag 2650  
c 2651

<210> 160  
<211> 556  
<212> PRT  
<213> Homo sapiens

<400> 160  
Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val  
1 5 10 15  
Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys  
20 25 30  
Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35	40	45
Asp Ala Pro Leu His Glu Ile Asn Gly Asp His		
50	55	60
Leu Lys Ile Cys		
Pro Gln Gly Ser Thr Cys Cys Ser Gln Glu Met	Glu	Glu
65	70	75
Lys Tyr		
Ser Leu Gln Ser Lys Asp Asp Phe Lys Ser Val	Val	Val
80	85	90
Ser Gln		
Cys Asn His Leu Gln Ala Val Phe Ala Ser Arg	Tyr	Lys
95	100	Phe
Asp Tyr Lys		
Asp Glu Phe Phe Lys Glu Leu Leu Glu Asn Ala	Glu	Lys
110	115	Ser Leu
120		
Asn Asp Met Phe Val Lys Thr Tyr Gly His Leu	Tyr	Met Gln
125	130	Asn
Asn		
Ser Glu Leu Phe Lys Asp Leu Phe Val Glu Leu	Lys	Arg Tyr
140	145	Tyr
150		
Val Val Gly Asn Val Asn Leu Glu Glu Met Leu	Asn Asp	Phe Trp
155	160	165
Asp Trp		
Ala Arg Leu Leu Glu Arg Met Phe Arg Leu Val	Asn Ser	Gln Tyr
170	175	180
Ala		
His Phe Thr Asp Glu Tyr Leu Glu Cys Val Ser	Lys Tyr	Thr Glu
185	190	195
Thr Glu		
Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys	Leu Lys	Leu Gln
200	205	210
Leu		
Val Thr Arg Ala Phe Val Ala Ala Arg Thr Phe	Ala Gln	Gly Leu
215	220	225
Ala		
Ala Val Ala Gly Asp Val Val Ser Lys Val Ser	Val Val Asn	Pro
230	235	240
Pro		
Thr Ala Gln Cys Thr His Ala Leu Leu Lys Met	Ile Tyr	Cys Ser
245	250	255
Ile		
His Cys Arg Gly Leu Val Thr Val Lys Pro Cys	Tyr Asn Tyr	Cys
260	265	270
Cys		
Ser Asn Ile Met Arg Gly Cys Leu Ala Asn Gln	Gly Asp	Leu Asp
275	280	285
Asp		
Phe Glu Trp Asn Asn Phe Ile Asp Ala Met Leu	Met Val	Ala Glu
290	295	300
Ala		
Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val	Met Asp	Pro Ile
305	310	315
Asp		
Asp Val Lys Ile Ser Asp Ala Ile Met Asn Met	Gln Asp	Asn Ser
320	325	330
Ser		
Val Gln Val Ser Gln Lys Val Phe Gln Gly Cys	Gly Pro	Pro Lys
335	340	345
Pro		
Pro Leu Pro Ala Gly Arg Ile Ser Arg Ser Ile	Ser Glu	Ser Ala

350	355	360
Phe Ser Ala Arg Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr	
365	370	375
Thr Ala Ala Gly Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys	
380	385	390
Glu Lys Leu Lys Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser	
395	400	405
Asn Val Cys Asn Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu	
410	415	420
Asp Asp Cys Trp Asn Gly Lys Gly	Ser Arg Tyr Leu Phe Ala	
425	430	435
Val Thr Gly Asn Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val	
440	445	450
Gln Val Asp Thr Ser Lys Pro Asp Ile	Ile Leu Ile Leu Arg Gln Ile	
455	460	465
Met Ala Leu Arg Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn	
470	475	480
Gly Asn Asp Val Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly	
485	490	495
Glu Gly Ser Gly Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu	
500	505	510
Phe Asp Tyr Asn Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu	
515	520	525
Lys Ala Asp Ser Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu	
530	535	540
Leu Thr Val Phe Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp	
545	550	555

Arg

<210> 161  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 161  
ctccgtggta aaccccacag ccc 23

<210> 162  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 162  
tcacatcgat gggatccatg accg 24

<210> 163  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 163  
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164  
<211> 870  
<212> DNA  
<213> Homo sapiens

<400> 164  
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50  
gctgagtatc ctgacacctgag tcataccccag ggatcaggag cctccagcag 100  
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150  
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200  
atgtccatgg tctcttagcag cctgaatcca ggggtcgcca gaggccacag 250  
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
gtgagtgc当地 agattggttc ctgagagccc cgagaagaaa attcatgaca 350  
gtgtctggc tgccaaagaa gcagtgc当地 tgtgatcatt tcaagggcaa 400  
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagcttgct 500  
ctgcctttgt aggagctctg agcgcccact cttccaatta aacattctca 550  
gccaaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600  
actctcccac tgtacccacc cctaaatcat tccagtgctc tcaaaaaagca 650  
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700  
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750  
ctgaaagatt ccagggaaact gtagcttcct agctagtgtc atttaacctt 800  
aaatgcaatc aggaaaagtag caaacagaag tcaataaaata tttttaaatg 850  
tcaaaaaaaaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1 5 10 15  
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg  
20 25 30  
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu  
35 40 45  
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro  
50 55 60  
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys  
65 70 75  
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln  
80 85 90  
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln  
95 100 105  
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu  
110 115

<210> 166  
<211> 551  
<212> DNA  
<213> Homo sapiens

<400> 166  
aatggctgtc ttagtacttc gcctgacagt tgtccctggga ctgcttgct 50  
tattcctgac ctgctatgca gacgacaac cagacaagcc agacgacaag 100  
ccagacgact cgggcaaaga cccaaagcca gacttccccca aattcctaag 150  
cctcctggc acagagatca ttgagaatgc agtgcgatcc atcctccgct 200  
ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250  
cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300  
tccaagagca gccaaatcct gctttccag tttggctcca caagtcctcc 350  
aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400  
tggcttcaac caaacagaac tcattttgaa caccctgact gcattttgc 450  
tttttagaaaat ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500  
agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550

a 551

<210> 167  
<211> 87  
<212> PRT  
<213> Homo sapiens

<400> 167  
Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu  
1 5 10 15  
Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

20	25	30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe		
35	40	45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala		
50	55	60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met		
65	70	75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys		
80	85	

<210> 168  
<211> 1371  
<212> DNA  
<213> Homo sapiens

<400> 168  
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ggaagcacag ctcagagctg gtctgccatg gacatccctgg tcccactcct 100  
gcagctgctg gtgctgcttc ttaccctgcc cctgcaccctc atggctctgc 150  
tgggctgctg gcagccccctg tgcaaaagct acttccccta cctgatggcc 200  
gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacggggagct 250  
cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300  
tggagctggg ctgcggacc ggagccaact ttcagttcta cccaccgggc 350  
tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400  
aaagagcatg gctgagaaca ggcaccccca atatgagcg 450  
ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
gtctgcactc tgggctgtg ctctgtgcag agcccaagga aggtcctgca 550  
ggaggtccgg agagtactga gaccgggagg tgtgctctt ttctgggagc 600  
atgtggcaga accatatgga agctggccct tcatgtggca gcaagtttc 650  
gagcccacct gaaaacacat tggggatggc tgctgcctca ccagagagac 700  
ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750  
agccccctcc cttgaagtgg ctacctgttgc ggccccacat catggaaag 800  
gctgtcaaac aatcttcccc aagctccaag gcactcattt gtccttccc 850  
cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900  
gagggaccta gcagaatgag agaagacatt catgtaccac ctactagttcc 950  
ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgcccttc 1000  
gacagtgaaa aagctctact tctacgctga cccagggagg aaacactagg 1050  
accctgttgt atcctcaact gcaagttct ggactagttct cccaacgttt 1100

gcctcccaat gtgtccctt tccttcgttc ccatggtaaa gtcctctcg 1150  
cttcctcct gaggctacac ccatgcgtct ctaggaactg gtcacaaaag 1200  
tcatggtgcc tgcattccctg ccaagcccccc ctgaccctct ctccccacta 1250  
ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350  
taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu
1					5					10				15
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro
					20					25				30
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro
					35					40				45
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser
					50					55				60
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu
					65					70				75
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro
					80					85				90
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys
					95					100				105
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu
					110					115				120
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp
					125					130				135
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val
					140					145				150
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg
					155					160				165
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr
					170					175				180
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp
					185					190				195
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys
					200					205				210
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln
					215					220				225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
230 235 240  
Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys  
245 250 255  
Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile  
260 265 270  
Tyr Leu Pro Leu Arg Gly Thr  
275

<210> 170  
<211> 1621  
<212> DNA  
<213> Homo sapiens

<400> 170  
gtgggattta tttgagtgc a agatcgttt ctcagtggtg gtggaaagttg 50  
cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100  
agcttctgt a gataagggtt aaaaactaat atttatatga cagaagaaaa 150  
agatgtcatt ccgtaaagta a acatcatca tcttggcct ggctgttgct 200  
ctcttcttac tggtttgca ccataacttc ctcagcttga gcagttgtt 250  
aaggaatgag gttacagatt caggaattgtt agggcctcaa cctatagact 300  
ttgtccccaa tgctctccga catgcagtag atgggagaca agaggagatt 350  
cctgtggtca tcgctgcattc tgaagacagg cttggggggg ccattgcagc 400  
tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450  
ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgtat 500  
tccctgaaaa gcatcagata caaaattgtc aattttgacc cttaaactttt 550  
ggaaggaaaa gtaaaggagg atcctgacca gggggaaatcc atgaaacacctt 600  
taacctttgc aagggttctac ttgccaattc tggttcccag cgcaaagaag 650  
gccatataca tggatgtatga t gtaattgtt caaggtgata ttcttgccct 700  
ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750  
gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagttac 800  
aattacattt gctatcttga ctataaaaaag gaaagaattc gtaagcttc 850  
catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900  
tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950  
aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000  
cacaacacctt cctctgctta tcgtatTTTA tcaacagcac tctaccatcg 1050  
atcctatgtt gaaatgtccgc caccttgggtt ccagtgtgg aaaacgatat 1100  
tcacctcagt ttgttaaaggc tgccaaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac ttagtgg 1200  
atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250  
atctcaaaca taaagtaaa cagaatttga actgtaaagca agcatttctc 1300  
aggaagtcct ggaagatago atgcatttgg agtaacagtt gctaggctc 1350  
aatgcctatc ggtagcaagg catggaaaaa gatgtgtcag cttagttaaag 1400  
atgacaaact gccctgtctg gcagtcagct tcccagacag actataagact 1450  
ataaaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500  
aatgactgga aagaagaact gatatggcta gttcagctag ctggcacaga 1550  
taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600  
taaataaaac ttacatTTT c 1621

<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val  
1 5 10 15

Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser  
20 25 30

Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
35 40 45

Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
50 55 60

Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
65 70 75

Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
80 85 90

Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
95 100 105

Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
110 115 120

Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
125 130 135

Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
140 145 150

Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
155 160 165

Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
170 175 180

Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

185	190	195
Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg		
200	205	210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys		
215	220	225
Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser		
230	235	240
Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg		
245	250	255
Gln Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val		
260	265	270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr		
275	280	285
Pro Pro Leu Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp		
290	295	300
Pro Met Trp Asn Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg		
305	310	315
Tyr Ser Pro Gln Phe Val Lys Ala Ala Lys Leu Leu His Trp Asn		
320	325	330
Gly His Leu Lys Pro Trp Gly Arg Thr Ala Ser Tyr Thr Asp Val		
335	340	345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro Thr Gly Lys Phe Asn Leu		
350	355	360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn Ile Lys		
365	370	

<210> 172  
<211> 585  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 71, 76, 86, 91, 162, 220, 269, 281  
<223> unknown base

<400> 172  
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aggttacaga ttcaggaatt nttaggnctc aacctntaga ntttgtccca 100  
aatgttctcc gacatgcagt agatgggaga caagaggaga ttccctgtggt 150  
catcgctgca tntgaagaca ggcttgggg ggccattgca gctataaaca 200  
gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250  
aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300  
aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac caggggaaat ccatgaaacc tttaaccctt 400  
gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450  
catggatgtat gatgtatttgc tgcaagggtga tattcttgcc cttaacaata 500  
cagcaactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550  
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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aacgcgggcg gccagacaac gggctggct ccggggcctg cggcgcggc 150  
gctgagctgg cagggcgggt cggggcgcgg gctgcattccg catctccccc 200  
atcgccctgca gtaagggcgg ccgcggcgag ccttgaggg gaacgacttg 250  
tcggagccct aaccaggggt gtctctgagc ctggtggat ccccgagcg 300  
tcacatcact ttccgatcac ttcaaagtgg ttaaaaacta atatttatat 350  
gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400  
ctgggctgtt gctctttct tactggtttt gcaccataac ttccctcagct 450  
tgaggcagtt tgttaaggaa tgaggttaca gattcaggaa ttgttagggcc 500  
tcaacctata ggactttgtc ccaaattgtc tccgacatgc agtagatggg 550  
agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcttgg 600  
ggggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650  
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700  
tgggctcaac agtgattccc tggaaaggat cagataaaaa attgtcaatt 750  
ttgaccctaa acttttgaa ggaaaaggtaa aggaggatcc tgaccagggg 800  
gaatccatga aaccttaac ctgtcaagg ttctacttgc caattctggg 850  
ttccccagcgc aaagaaggcc atatacatgg atgatgtat aattgtgca 900  
ggtgatatttc ttgccttta caatacagca ctgaagccag gacatgcagc 950  
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gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaaggaa 1050  
agaattcgtt agctttccat gaaagccagc acttgctcat ttaatcctgg 1100  
agttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150  
aactggaaaa atggatgaaa ctcaatgttag aagaggact gtatagcaga 1200

accctggctg gtagcatcac aacacccct ctttatcg tattttatca 1250  
acagcactt accatcgatc ctatgtggaa tgtccgccac cttgggttcca 1300  
tgtctggaaa acgatattca cctcagtttgc taaaggctgc caagttactc 1350  
catttggaaatg gacatttgaa gccatggggaa aggactgctt catatactga 1400  
tgtttggggaa aaaatggat attccagacc caacaggcaa attcaaccta 1450  
atccgaagat ataccgagat ctcaaacata aagtgaaaca gaatttgaac 1500  
tgtaagcaag catttctcag gaagtccctgg aagatagcat gcgtggaaag 1550  
taacagttgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600  
tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650  
ccagacagac tatagactat aaatatgtct ccacatgcct taccaagtgt 1700  
tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750  
tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800  
aacctgtggc ctgatctgta aataaaaactt acattttca ataggtaaaa 1850  
aaaaaaaaaaaaaaa aaaaaaa 1866

<210> 174  
<211> 823  
<212> DNA  
<213> Homo sapiens

<400> 174  
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ctcaccattg aggcagctcc actgtctgtg ctggctcgag ggtgctgcct 150  
gtcatggggg cagccatctc ccagggggcc ctcatcgcca tcgtctgcaa 200  
cggtctcggt ggcttcttgc tgctgctgct ctgggtcatc ctctgctggg 250  
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actccagccc tggccccctgt cctgagaagg cccaccacc ccagaagccc 350  
agccatgaag gcagctaccc gctgcagccc tgaaggcccc tggcctagcc 400  
tggagcccaag gacctaagtc cacctcaccc agagcctgga attaggatcc 450  
cagagttcag ccagcctggg gtccagaact caagagtccg cctgcttgg 500  
gctggaccacca gcggcccaaga gtctagccag cttggctcca ataggagctc 550  
agtggcccta aggagatggg cctgggggtgg gggcttatga gttggtgcta 600  
gagccaggcc catctggact atgctccatc ccaaggccca agggtcaggg 650  
gccgggtccca ctcttccct aggctgagca cctctaggcc ctcttaggtt 700  
ggaaagcaaa ctggaacccca tggcaataat aggagggtgt ccaggctggg 750

ccccctccctt ggtcctccca gtgttgctg gataataaat ggaactatgg 800

ctctaaaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys  
1 5 10 15

Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu  
20 25 30

Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu  
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro  
50 55 60

His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser  
65 70 75

Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr  
80 85

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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tgtccctcaa acacctgagt gctactccct atttgcattt gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgaaaa 200

gatacaatcc ttggcctgtg tattctcgca ttagccttgtt ctggccat 250

gatgtttacc ttccagattca tcaccaccc tctggttcac attttcattt 300

cattggttat tttgggattt tggtttgtct gcgggtttt atgggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcacacgg 450

cagtgctgct cgtcttgatt tttgttctca gaaagagaat aaaattgaca 500

gttgagctt tccaaatcac aaataaagcc atcagcagtg ctcccttcct 550

gctgttccag ccactgtgga catttgccat cctcattttcc ttctgggtcc 600

tctgggtggc tgtgctgctg agcctggaa ctgcaggagc tgcccagggtt 650

atggaaggcg gccaaatggaa atataagccc ctggggca ttggatcat 700

gtggatcgatc catttaatttgc gcttcatctg gactagtgaa ttcatccctt 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800  
agaagtaaaa atgatccctcc tgatcatccc atcccttcgt ctctctccat 850  
tctcttcttc taccatcaag gaaccgttgt gaaagggtca tttttaatct 900  
ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950  
aaagaacagc agcatggtgc attgtccagg tacctgtcc gatgctgcta 1000  
ctgctgtttc tgggtgtctt acaaataacct gctccatctc aaccagaatg 1050  
cataactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100  
gatgcattca aaatcttgc caagaactca agtcaactta catctattaa 1150  
ctgctttgga gacttcataa tttttctagg aaaggtgtta gtgggtgttt 1200  
tcactgtttt tggaggactc atggctttt actacaatcg ggcattccag 1250  
gtgtgggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300  
ccatagttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350  
gtttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400  
tttatggatc aagaatttct gagttcgtt aaaaaggagca acaaattaaa 1450  
caatgcaagg gcacagcagg acaagcactc attaaggaat gaggaggaa 1500  
cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550  
gaaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
tagagaaaag ttagtgaatt tttttttaaa agacctaata aaccctattc 1650  
ttcctcaaaa 1660

<210> 177  
<211> 445  
<212> PRT  
<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
1						5			10					15

Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr
					20			25						30

Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu
						35			40					45

Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn
				50				55						60

Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys
				65				70						75

Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu
					80			85						90

Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

95	100	105
Glu Leu Phe Gln Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro Phe	
110	115	120
Leu Leu Phe Gln Pro Leu Trp Thr Phe Ala	Ile Leu Ile Phe Phe	
125	130	135
Trp Val Leu Trp Val Ala Val Leu Leu	Ser Leu Gly Thr Ala Gly	
140	145	150
Ala Ala Gln Val Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro Leu	
155	160	165
Ser Gly Ile Arg Tyr Met Trp Ser Tyr His	Leu Ile Gly Leu Ile	
170	175	180
Trp Thr Ser Glu Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile Ala	
185	190	195
Gly Ala Val Val Thr Cys Tyr Phe Asn Arg	Ser Lys Asn Asp Pro	
200	205	210
Pro Asp His Pro Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe Tyr	
215	220	225
His Gln Gly Thr Val Val Lys Gly Ser	Phe Leu Ile Ser Val Val	
230	235	240
Arg Ile Pro Arg Ile Ile Val Met Tyr	Met Gln Asn Ala Leu Lys	
245	250	255
Glu Gln Gln His Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys Cys	
260	265	270
Tyr Cys Cys Phe Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu Asn	
275	280	285
Gln Asn Ala Tyr Thr Thr Ala Ile Asn	Gly Thr Asp Phe Cys	
290	295	300
Thr Ser Ala Lys Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser Ser	
305	310	315
His Phe Thr Ser Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe Leu	
320	325	330
Gly Lys Val Leu Val Val Cys Phe Thr	Val Phe Gly Gly Leu Met	
335	340	345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln	Val Trp Ala Val Pro Leu	
350	355	360
Leu Leu Val Ala Phe Phe Ala Tyr Leu	Val Ala His Ser Phe Leu	
365	370	375
Ser Val Phe Glu Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe Ala	
380	385	390
Val Asp Leu Glu Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr Phe	
395	400	405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys	Arg Ser Asn Lys Leu	

410

415

420

Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu  
425 430 435

Glu Gly Thr Glu Leu Gln Ala Ile Val Arg  
440 445

<210> 178

<211> 2773

<212> DNA

<213> Homo sapiens

<400> 178

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On the 1<sup>st</sup> of April, 1865, the author left New York for Europe.

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<211> 678  
<212> PRT  
<213> Homo sapiens

<400> 179  
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Cys Asp Val Lys Ala Gly Lys Ile Ile Asp Pro Glu Phe Ile Val  
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Lys Cys Pro Ala Gly Cys Gln Asp Pro Lys Tyr His Val Tyr Gly  
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Thr Asp Val Tyr Ala Ser Tyr Ser Ser Val Cys Gly Ala Ala Val  
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His Ser Gly Val Leu Asp Asn Ser Gly Gly Lys Ile Leu Val Arg  
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Lys Val Ala Gly Gln Ser Gly Tyr Lys Gly Ser Tyr Ser Asn Gly  
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Val Gln Ser Leu Ser Leu Pro Arg Trp Arg Glu Ser Phe Ile Val  
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Thr Tyr Ser Ser Ser Lys Ser Pro Ala Ala Gln Ala Gly Glu Thr  
155 160 165  
  
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Pro Val Thr Leu Met Gln Leu Leu Ala Val Thr Val Ala Val Ala  
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Thr Ser Ile Pro Arg Pro Gln Ser Val Gly His Arg Ser Gln Glu  
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Met Asp Leu Trp Ser Thr Ala Thr Tyr Thr Ser Ser Gln Asn Arg  
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Pro Arg Ala Asp Pro Gly Ile Gln Arg Gln Asp Pro Ser Gly Ala  
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Ala Phe Gln Lys Pro Val Gly Ala Asp Val Ser Leu Gly Leu Val  
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Pro Lys Glu Glu Leu Ser Thr Gln Ser Leu Glu Pro Val Ser Leu  
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Gly Asp Pro Asn Cys Lys Ile Asp Leu Ser Phe Leu Ile Asp Gly

290

295

300

Ser Thr Ser Ile Gly Lys Arg Arg Phe Arg Ile Gln Lys Gln Leu  
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Leu Met Gly Val Val Gln Tyr Gly Asp Asn Pro Ala Thr His Phe  
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Asn Leu Lys Thr His Thr Asn Ser Arg Asp Leu Lys Thr Ala Ile  
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Glu Lys Ile Thr Gln Arg Gly Gly Leu Ser Asn Val Gly Arg Ala  
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Ile Ser Phe Val Thr Lys Asn Phe Phe Ser Lys Ala Asn Gly Asn  
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Arg Ser Gly Ala Pro Asn Val Val Val Met Val Asp Gly Trp  
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Pro Thr Asp Lys Val Glu Glu Ala Ser Arg Leu Ala Arg Glu Ser  
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Gly Ile Asn Ile Phe Phe Ile Thr Ile Glu Gly Ala Ala Glu Asn  
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Glu Lys Gln Tyr Val Val Glu Pro Asn Phe Ala Asn Lys Ala Val  
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Gly Leu His Lys Thr Leu Gln Pro Leu Val Lys Arg Val Cys Asp  
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Thr Asp Arg Leu Ala Cys Ser Lys Thr Cys Leu Asn Ser Ala Asp  
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Glu Ile Ser Asp Thr Asp Thr Arg Ile Gly Ala Val Gln Tyr Thr  
 530 535 540

Tyr Glu Gln Arg Leu Glu Phe Gly Phe Asp Lys Tyr Ser Ser Lys  
 545 550 555

Pro Asp Ile Leu Asn Ala Ile Lys Arg Val Gly Tyr Trp Ser Gly  
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Gly Thr Ser Thr Gly Ala Ala Ile Asn Phe Ala Leu Glu Gln Leu  
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Phe Lys Lys Ser Lys Pro Asn Lys Arg Lys Leu Met Ile Leu Ile  
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Thr Asp Gly Arg Ser Tyr Asp Asp Val Arg Ile Pro Ala Met Ala

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Ala Ala Gln Glu Glu Leu Glu Val Ile Ala Thr His Pro Ala Arg  
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Asp His Ser Phe Phe Val Asp Glu Phe Asp Asn Leu His Gln Tyr  
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<211> 1759  
<212> DNA  
<213> Homo sapiens

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<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

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L	e	u	P	r	o	G	l	n	H	i	s	H	i	S	G	l	y	A	l	u	P	o	G	l	e		
																									20	25	30

A	s	p	o	A	l	a	H	i	s	T	y	R	S	e	r	L	e	T	h	R	I	l	e	A	s	l	e
																									35	40	45

A	s	p	o	A	l	a	H	i	s	T	y	R	S	e	r	L	e	T	h	R	I	l	e	A	s	l	e
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V	a	l	G	l	u	V	a	l	u	G	l	u	N	S	e	r	V	a	l	u	G	l	u	A	l	u	u
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A	l	a	S	e	r	V	a	l	u	G	l	u	T	h	R	A	s	N	I	l	e	A	l	u	u		
																									80	85	90

S	e	r	A	l	u	H	l	u	S	l	u	L	u	S	l	u	L	u	G	l	u	V	l	u	G	l	u	u
																									95	100	105	

G	l	u	T	r	P	o	C	s	S	e	R	G	l	u	P	o	L	u	E	u	A	G	l	u	A	l	u	u
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Tyr Gly Thr Val Asn Leu Leu His	Gly Val Asn Pro Gly Glu	Thr
140	145	150
Pro Val Thr Cys Thr Ala Gly Ile	Gly Thr Phe Ile Val Glu Phe	
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Ala Thr Leu Ser Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val	
170	175	180
Ala Arg Val Ala Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile	
185	190	195
Gly Leu Val Gly Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val	
200	205	210
Ala Gln Asp Ala Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu	
215	220	225
Tyr Leu Val Lys Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met	
230	235	240
Ala Met Phe Leu Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg	
245	250	255
Phe Asp Asp Trp Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val	
260	265	270
Ser Met Pro Val Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu	
275	280	285
Gln Ser Leu Ile Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu	
290	295	300
Asn Tyr Tyr Thr Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe	
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Tyr Asn Ile Pro Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr	
320	325	330
Pro Leu Arg Pro Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg	
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Ala Thr Gly Asp Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val	
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Glu Ser Ile Glu Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr	
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Ile Lys Asp Leu Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser	
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Phe Phe Leu Ala Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp	
395	400	405
Pro Thr Asn Phe Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val	
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Ile Thr Pro Tyr Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile	
425	430	435
Phe Asn Thr Glu Ala His Pro Ile Asp	Leu Ala Leu His Cys	

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met		
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys		
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly		
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys		
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Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro		
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<211> 2056  
<212> DNA  
<213> Homo sapiens

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DRAFT

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<210> 183  
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<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

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					20				25				30		
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
					35				40				45		
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
					50				55				60		
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
					65				70				75		
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
					80				85				90		
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
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Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
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Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
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His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
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Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
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Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
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Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
					200				205				210		
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
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Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe  
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Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val  
260 265 270  
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<211> 808  
<212> DNA  
<213> Homo sapiens

<220>

<221> unsure  
<222> 654, 711, 748  
<223> unknown base

<400> 184

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<210> 186  
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<400> 186  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
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<210> 188  
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<212> DNA  
<213> Homo sapiens

<400> 188  
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gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcag 250  
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cacctacagt gtctcattcc ccatgittag caagattgca gtcaccggta 400  
ctggtgccca tcctgccttc aagtacctgg cccagacttc tgggaaggag 450  
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<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

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				20					25				30	
Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly
				35				40				45		
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr
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Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly
				65				70				75		
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly
				80				85				90		
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg
				95				100				105		
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val
				110				115				120		
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr
				125				130				135		
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala
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Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val

155

160

165

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Leu Leu Lys Arg Glu Asp Leu  
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<210> 190

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 190

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<210> 191

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 191

agtctgggcc aggtacttga aggc 24

<210> 192

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

caacatccgg ggcaaactgg tgcgcgttga gaagtaccgc ggatcggtgt 50

<210> 193

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 193

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ctgggggccc gggccgcctt ctctcgagg tggcaggaag ccaggttgca 150

gggtgtccgc ttccctcagtt ccagagaggt ggatcgcatg gtctccacgc 200

ccatcgagg cctcagctac gttcagggtt gcaccaaaaa gcatcttaac 250

agcaagactg tggccagtg cctggagacc acagcacaga gggtcccaga 300

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 aaagagctc tgtttcttt gaaaaaaaaaaaaaa 2187  
  
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 <212> PRT  
 <213> Homo sapiens  
  
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     20   25   30  
  
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg  
     35   40   45  
  
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr  
     50   55   60  
  
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly  
     65   70   75  
  
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala  
     80   85   90  
  
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu  
     95   100   105  
  
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly  
   110   115   120  
  
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr  
   125   130   135  
  
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile  
   140   145   150  
  
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr  
   155   160   165  
  
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln  
   170   175   180  
  
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro  
   185   190   195  
  
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu  
   200   205   210  
  
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly  
   215   220   225  
  
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln  
   230   235   240  
  
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser Pro		
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn		
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln		
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser		
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile		
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile		
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr Gly Thr Pro Thr Met Phe		
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe Ser Ser Tyr Asp Ile Ser		
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly Ser Pro Ala Pro Pro Glu		
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile Asn Met Lys Asp Leu Val		
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser Pro Val Thr Phe Ala His		
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys Ala Glu Ser Val Gly Arg		
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile Met Asn Met Glu Ala Gly		
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly Glu Leu Cys Ile Arg Gly		
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly Glu Pro Gln Lys Thr Glu		
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr Trp Thr Gly Asp Val Ala		
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys Ile Val Gly Arg Ser Lys		
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn Ile Tyr Pro Ala Glu Leu		
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys Val Gln Glu Val Gln Val		
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly Glu Glu Ile Cys Ala Cys		
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr Thr Val Glu Glu Ile Lys		

560                    565                    570  
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr  
575                    580                    585  
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile  
590                    595                    600  
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu  
605                    610                    615

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<212> DNA  
<213> Homo sapiens

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gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcattcctggc 150  
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gaggcacctt cctgtatggt accccacga tgttcgttga cattctgaac 250  
cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300  
tgctgggtcc cctgcaccc cagagtttatcc ccgagccatc atcaacaaga 350  
taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400  
gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450  
cgtggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500  
cagggacgct ggcaaagctg aacacgcccc gggagctgtg catccgaggg 550  
tactgcgtca tgctggctta ctgggttgcg cctcagaaga cagaggaagc 600  
agtggatcag gacaagtggt attggacagg agatgtcgcc ac 642

<210> 196  
<211> 1575  
<212> DNA  
<213> Homo sapiens

<400> 196  
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aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgtcc 150  
ccgaacaaga tgaagacagt gaagtgcgcg ccgggcgtgg acgtctgcac 200  
cgaggccgtg ggggcgggtgg agaccatcca cggacaattc tcgctggcag 250  
tgcggggttt cggttcggga ctccccggca agaatgaccg cggcctggat 300  
cttcacgggc ttctggcggtt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacacctcgcg ggcgctcgac ccggcaggta 400  
 atgagagtgc atacccgcccc aacggcggtgg agtgctacag ctgtgtgggc 450  
 ctgagccggg aggcgctgcca ggg tacatcg ccgcggctcg tgagctgcta 500  
 caacgccagc gatcatgtct acaagggcgtg cttcgacggc aacgtcacct 550  
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 gatgaattct gcactcgaaa tggagtaaca ggcccagggt tcacgctcag 650  
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 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgccccc 800  
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 ctccgagaca gggagtagaa cacgaggcct cccggatga ggagcccagg 900  
 ttgactggag gcccgcgtgg ccaccaggac cgcaaggcaatt cagggcagta 950  
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 tagccagcct ggactttggaa gctgggggtg ggtggacaa tggctccca 1450  
 ctctaaggcac tgcctccctt actccccca tctttggggaa atcggttccc 1500  
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<210> 197  
 <211> 346  
 <212> PRT  
 <213> Homo sapiens

<400> 197  
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                       20   25   30  
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50	55	60
Cys Thr Glu Ala Val Gly Ala Val Glu Thr Ile His Gly Gln Phe		
65	70	75
Ser Leu Ala Val Arg Gly Cys Gly Ser Gly Leu Pro Gly Lys Asn		
80	85	90
Asp Arg Gly Leu Asp Leu His Gly Leu Leu Ala Phe Ile Gln Leu		
95	100	105
Gln Gln Cys Ala Gln Asp Arg Cys Asn Ala Lys Leu Asn Leu Thr		
110	115	120
Ser Arg Ala Leu Asp Pro Ala Gly Asn Glu Ser Ala Tyr Pro Pro		
125	130	135
Asn Gly Val Glu Cys Tyr Ser Cys Val Gly Leu Ser Arg Glu Ala		
140	145	150
Cys Gln Gly Thr Ser Pro Pro Val Val Ser Cys Tyr Asn Ala Ser		
155	160	165
Asp His Val Tyr Lys Gly Cys Phe Asp Gly Asn Val Thr Leu Thr		
170	175	180
Ala Ala Asn Val Thr Val Ser Leu Pro Val Arg Gly Cys Val Gln		
185	190	195
Asp Glu Phe Cys Thr Arg Asp Gly Val Thr Gly Pro Gly Phe Thr		
200	205	210
Leu Ser Gly Ser Cys Cys Gln Gly Ser Arg Cys Asn Ser Asp Leu		
215	220	225
Arg Asn Lys Thr Tyr Phe Ser Pro Arg Ile Pro Pro Leu Val Arg		
230	235	240
Leu Pro Pro Pro Glu Pro Thr Thr Val Ala Ser Thr Thr Ser Val		
245	250	255
Thr Thr Ser Thr Ser Ala Pro Val Arg Pro Thr Ser Thr Thr Lys		
260	265	270
Pro Met Pro Ala Pro Thr Ser Gln Thr Pro Arg Gln Gly Val Glu		
275	280	285
His Glu Ala Ser Arg Asp Glu Glu Pro Arg Leu Thr Gly Gly Ala		
290	295	300
Ala Gly His Gln Asp Arg Ser Asn Ser Gly Gln Tyr Pro Ala Lys		
305	310	315
Gly Gly Pro Gln Gln Pro His Asn Lys Gly Cys Val Ala Pro Thr		
320	325	330
Ala Gly Leu Ala Ala Leu Leu Ala Val Ala Ala Gly Val Leu		
335	340	345

Leu

<210> 198  
<211> 1657  
<212> DNA  
<213> Homo sapiens

<400> 198  
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gtcctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150  
tgattaccag accctgagga ttggggact ggtgttcgct gtggtcctct 200  
tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagttc 250  
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catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
catcaggtgg aacccctctgg aacctgaggc ggctgcttga acctttggat 400  
gcaaatagtcg atgtttaaga aaaccggcca cttcagcaac agccctttcc 450  
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cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550  
gcgggtcctgc ccacccccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600  
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caggcccagg gcttctactc tgccccctggg gaatgtgtcc cctgcataatc 1150  
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ccgttgggc cagcacaccg ggtatggatgg agggagagca gaggcctttg 1350  
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cttgctctg cctgtcggtg gtcagagcgg tgaggcaggt gggttggaga 1450  
ctcagcaggc tccgtgcagc cttggaaac agttagaggt tgaaggtcat 1500  
aacgagagt ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550  
ccgcggaaa ccaaccaaac cgtgcgtgt gaccattgc tgttcttgt 1600  
atcgtatct atcctaaca acaacagaaa aaaggaataa aatatcctt 1650  
gtttcct 1657

<210> 199  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 199  
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met  
1 5 10 15  
val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
20 25 30  
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
35 40 45  
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
50 55 60  
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
65 70 75  
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
80 85 90  
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
95 100 105  
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
110 115 120

<210> 200  
<211> 415  
<212> DNA  
<213> Homo sapiens

<400> 200  
aaacctgacg ccatgaagat cccggccctt cctgccgtgg tgctcctctc 50  
cctcctggtg ctccactctg cccagggagc caccctgggt ggtcctgagg 100  
aagaaagcac cattgagaat tatgcgtcac gaccggagac ctttaacacc 150  
ccgttcctga acatcgacaa attgcgtatc gcgtttaagg ctgtatgagg 200  
cctgaactgg cacggccctt ttgagtctat caaaaggaaa cttccttcc 250  
tcaactggta tgccttcct aagctgaaag gactgaggag cgcaactcct 300  
gatgcccagt gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350  
tgattctcaa cctaccataa ctcttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu  
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu  
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn  
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala  
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg  
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly  
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln  
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gccttgccct cagtgattct cacctgcctc tcccttcgg 100

cagcaggagt ctcccaggtt gttcttcctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggcttg ccggccactc 200

atgagagtgt ttttgttaa agtatttttt agaataactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaaaggtt tatgaggctt tagggaaatg 300

tcaaccctca aattttgtt atactagatg gcttccattt acccacoact 350

attttaaggt cccttattt ttaggttcaa ggtcatttg acttgagaaa 400

gtgcccttct gcagcttcat tgattttgtt tatcttcaact attaattgtt 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgttagtg atcccacaaa tgtgattgtt 550

aattttaatg ttattctaat attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagtttg agtataattt tcaacttagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203  
<211> 52  
<212> PRT  
<213> Homo sapiens

<400> 203  
Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu  
1 5 10 15  
Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
20 25 30  
Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
35 40 45  
Cys Gly Phe Ala Gly His Ser  
50

<210> 204  
<211> 1917  
<212> DNA  
<213> Homo sapiens

<400> 204  
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gcttcggctc tggctgctgt tggctcctcct gcccctcagcg cagggccgccc 100  
agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150  
tctttggaga attacgaacc atgttcaagt caaaaactgca gctgctacca 200  
tggtgtcata gaagaggatc taactcctt ccgaggaggc atctccagga 250  
agatgatggc agaggttagtc agacggaagc tagggaccca ctatcagatc 300  
actaagaaca gactgtaccg ggaaaatgac tgcattgttcc cctcaagggtg 350  
tagtggtgtt gagcacttta ttttggaaagt gatcggcggt ctccttgaca 400  
tggagatggt gatcaatgta cgagattatc ctcaggttcc taaaatggatg 450  
gagcctgccca tcccagtctt ctccttcagt aagacatcag agtaccatgaa 500  
tatcatgtat cctgcttggc cattttggga agggggaccc gctgtttggc 550  
caatttatcc tacaggtctt ggacgggtggg acctcttcag agaagatctg 600  
gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagoata 650  
tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttotgt 700  
ctcggaaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750  
tggaaatcta tgaaagatac ctttaggaaag ccagctgcta aggatgtcca 800  
tcttggat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850  
ctgcaagttt ccggtttaaa cacctcttcc tgtgtggctc acttggtttc 900  
catgttggtg atgagtggtc agaattcttc tatccacagc tgaagccatg 950  
ggttcactat atcccaagtca aaacagatct ctccaaatgtc caagagctgt 1000

tacaatttgt aaaagcaa at gatgatgt ag ctcaagag at tgctgaaagg 1050  
ggaaggccagt ttatttagaa ccatttgac agtggatgaca tcacctgtta 1100  
ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150  
cgagaaggaa aggttatgtat caaatttattc ccaaaatgtt gaaaactgaa 1200  
ctata tagtagt catcatagga ccata gtcct ctttggca acagatctca 1250  
gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300  
tatctgctat caagccaa at acctggttt ctttatcatg ctgcacccag 1350  
agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
agttcaactt tttggatgaa taaggaccoag aaatcgtag agtggattt 1450  
tgaacccaaac tctacccccc attttcttaa gaccaatcac agcttgc 1500  
tcagatcatc cacctgtgtg agtccatcac tgtgaaattt actgtgtcca 1550  
tgtgatgatg cccttgc cattatttgg agcagaaaaat tcgtcatgg 1600  
gaagtagtac aactcattgc tggattgtg aaattattca aggctgtatc 1650  
tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700  
cttggggatc attctctgaa tggctcaagg aagcggtagc catgccatgc 1750  
aatgatgttag gagttctctt ttgtaaaacc ataaaactctg ttactcagga 1800  
gttttctata atgccacata gaaagaggcc aattgcatga gtaattattt 1850  
caattggatt tcaggttccc ttttgc ttcatgccct acttcttaat 1900  
gcctctctaa agccaaa 1917

<210> 205  
<211> 392  
<212> PRT  
<213> Homo sapiens

<400> 205  
Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu  
1 5 10 15  
Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser  
20 25 30  
Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn  
35 40 45  
Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val  
50 55 60  
Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys  
65 70 75  
Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln  
80 85 90  
Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

95	100	105
Ser Arg Cys Ser Gly Val Glu His Phe Ile Leu Glu Val Ile Gly		
110	115	120
Arg Leu Pro Asp Met Glu Met Val Ile Asn Val Arg Asp Tyr Pro		
125	130	135
Gln Val Pro Lys Trp Met Glu Pro Ala Ile Pro Val Phe Ser Phe		
140	145	150
Ser Lys Thr Ser Glu Tyr His Asp Ile Met Tyr Pro Ala Trp Thr		
155	160	165
Phe Trp Glu Gly Gly Pro Ala Val Trp Pro Ile Tyr Pro Thr Gly		
170	175	180
Leu Gly Arg Trp Asp Leu Phe Arg Glu Asp Leu Val Arg Ser Ala		
185	190	195
Ala Gln Trp Pro Trp Lys Lys Asn Ser Thr Ala Tyr Phe Arg		
200	205	210
Gly Ser Arg Thr Ser Pro Glu Arg Asp Pro Leu Ile Leu Leu Ser		
215	220	225
Arg Lys Asn Pro Lys Leu Val Asp Ala Glu Tyr Thr Lys Asn Gln		
230	235	240
Ala Trp Lys Ser Met Lys Asp Thr Leu Gly Lys Pro Ala Ala Lys		
245	250	255
Asp Val His Leu Val Asp His Cys Lys Tyr Lys Tyr Leu Phe Asn		
260	265	270
Phe Arg Gly Val Ala Ala Ser Phe Arg Phe Lys His Leu Phe Leu		
275	280	285
Cys Gly Ser Leu Val Phe His Val Gly Asp Glu Trp Leu Glu Phe		
290	295	300
Phe Tyr Pro Gln Leu Lys Pro Trp Val His Tyr Ile Pro Val Lys		
305	310	315
Thr Asp Leu Ser Asn Val Gln Glu Leu Leu Gln Phe Val Lys Ala		
320	325	330
Asn Asp Asp Val Ala Gln Glu Ile Ala Glu Arg Gly Ser Gln Phe		
335	340	345
Ile Arg Asn His Leu Gln Met Asp Asp Ile Thr Cys Tyr Trp Glu		
350	355	360
Asn Leu Leu Ser Glu Tyr Ser Lys Phe Leu Ser Tyr Asn Val Thr		
365	370	375
Arg Arg Lys Gly Tyr Asp Gln Ile Ile Pro Lys Met Leu Lys Thr		
380	385	390

Glu Leu

<210> 206

<211> 1425  
<212> DNA  
<213> Homo sapiens

<400> 206  
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ccctcgccctc tttcatcctg gccttggca ccggagtgga gttcgtgcgc 100  
tttacacctcc ttccggccact tcttggaggg atcccgagt ctggtggtcc 150  
ggatgcccgc caggatggc tggctgcct gcaggaccgc agcatcctg 200  
ccccctggc atggatctg gggctcctgc ttctatttgc tgggcagcac 250  
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300  
ggtccttcag aggtcactgt atgtggcctg cactgcctg gccttgcagc 350  
tggtgatgctg gtactggag cccataccca aaggccctgt gttgtggag 400  
gctcgggctg agccatgggc cacctgggtg ccgcctcctt gctttgtgct 450  
ccatgtcatc tcctggctcc tcatcttag catcctctc gtctttgact 500  
atgctgagct catggccctc aaacaggtat actaccatgt gctggggctg 550  
ggcgagccctc tggccctgaa gtctccccc gctctcagac tcttctccca 600  
cctgcgccac ccagtgtgtg tggagctgct gacagtgcgt tgggtggtgc 650  
ctaccctggg cacggaccgt ctccctcctg ctccctcctt taccctctac 700  
ctgggcctgg ctcacggct tgatcagcaa gacctccgct acctccgggc 750  
ccagctacaa agaaaactcc acctgctctc tcggcccccag gatggggagg 800  
cagagtgagg agctcactct gtttacaagc cctgttcttc ctctccact 850  
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900  
caaatccatg gactgaagga gatgccccctt ctactacttg agactttatt 950  
ctctgggtcc agctccatac cctaaattct gagttcagc cactgaactc 1000  
caagggtccac ttctcaccag caaggaagag tgggttatgg aagtcatctg 1050  
tcccttcaact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100  
aaggaaagga tctgccctga ccactccctt ggcactgtta ctgcctctg 1150  
cgccctcagggttgc accccaaacctt gtcacatagc tggccctcca ggcccccaacc 1200  
ttgcctcacc actcccgccctt ctagtctctg caccccttta ggccctgcct 1250  
ctgggctcag accccaaacctt agtcaagggg attctcctgc tcttaactcg 1300  
atgacttggg gctccctgct ctcccgagga agatgctctg caggaaaata 1350  
aaagtcaagcc tttttctaaa aaaaa 1400

<210> 207  
<211> 262  
<212> PRT  
<213> Homo sapiens

<400> 207  
Met Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe  
1 5 10 15  
Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser  
20 25 30  
Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp  
35 40 45  
Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu  
50 55 60  
Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly  
65 70 75  
Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser  
80 85 90  
Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr  
95 100 105  
Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro  
110 115 120  
Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr  
125 130 135  
Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu  
140 145 150  
Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met  
155 160 165  
Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro  
170 175 180  
Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu  
185 190 195  
Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val  
200 205 210  
Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr  
215 220 225  
Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg  
230 235 240  
Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg  
245 250 255  
Pro Gln Asp Gly Glu Ala Glu  
260

<210> 208  
<211> 2095  
<212> DNA

<213> Homo sapiens

<400> 208

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caacaaaaaa cttaagctt aatttcatct ggaattccac agtttctta 200  
gctccctgga cccgggtgac ctgttggctc ttcccgctgg ctgctctatc 250  
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300  
cgtgcttcgt agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350  
gagtaggatg tcactgagat ccctcaaatg gagcctcctg ctgctgtcac 400  
tcctgagtt ctttgtatg tggtacctca gccttccccca ctacaatgtg 450  
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500  
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550  
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600  
aggcaggcca ttagagttac ttggggtaaa aaaaagtctt ggtgggata 650  
tgaggttctt acattttct tattaggcca agaggctgaa aaggaagaca 700  
aaatgttggc attgtcctta gaggatgaac accttctta tggtgacata 750  
atccgacaag atttttaga cacatataat aacctgaccc tggaaaccat 800  
tatggcattc aggtggtaa ctgagtttg ccccaatgcc aagtacgtaa 850  
tgaagacaga cactgatgtt ttcatcaata ctggcaattt agtgaagtat 900  
cttttaaacc taaaccactc agagaagttt ttcaacaggaa atccctcta 950  
tgataattat tcctatagag gattttacca aaaaacccat atttcttacc 1000  
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ataatgtcca gagatttggt gccaggatc tatgaaatga tgggtcacgt 1100  
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150  
taaaaagtgaa cattcatatt ccagaagaca caaatcttt ctttctatat 1200  
agaatccatt tggatgtctg tcaactgaga cgtgtgattt cagccatgg 1250  
cttttcttcc aaggagatca tcacttttg gcaggtcatg ctaaggaaca 1300  
ccacatgccca ttatataactt cacattctac aaaaagccta gaaggacagg 1350  
ataccttgcgt gaaagtgtta aataaaagtag gtactgtgga aaattcattgg 1400  
ggaggtcagt gtgctggctt acactgaact gaaactcatg aaaaacccag 1450  
actggagact ggagggttac acttgcgttatt tattagtcag gcccattcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600  
ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650  
aacaatgtag agtttattt attgaacaat gtatgcactt gaaggtttg 1700  
tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750  
aaaaaaacttc ttcaactgaag ttatactgaa caaaatttta cctgttttg 1800  
gtcatttata aagtacttca agatgttgca gtatccaca gttatttata 1850  
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caagataaaaa aggatagtga atcattctt acatgcaaac atttccagt 1950  
tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050  
tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu	1	5	10	15
Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe		20	25		30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu			40	45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg	50	55		60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His	65	70		75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp	80	85		90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys	95	100		105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln	110	115		120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp	125	130		135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp	140	145		150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp	155	160		165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp  
                  170                     175                     180  
 Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu  
                  185                     190                     195  
 Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile  
                  200                     205                     210  
 Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser  
                  215                     220                     225  
 Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly  
                  230                     235                     240  
 Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu  
                  245                     250                     255  
 Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val  
                  260                     265                     270  
 Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu  
                  275                     280                     285  
 Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys  
                  290                     295                     300  
 Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu  
                  305                     310                     315  
 Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His  
                  320                     325                     330

Tyr

<210> 210  
 <211> 745  
 <212> DNA  
 <213> Homo sapiens

<400> 210  
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50  
 gctggacttc ttggagtctt tctagctcct gccctagcta actataatat 100  
 caacgtcaat gatgacaaca acaatgctgg aagtggcag cagtcagtga 150  
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
 gactcctgga attccatctg ggattatgga aatggcttg ctgcaaccag 250  
 actcttcaa aagaagacat gcattgtca caaaatgaac aaggaagtca 300  
 tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350  
 ggtaaggggac caggaggacc acctcccaag ggcctgatgt actcagtcaa 400  
 cccaaacaaa gtcgatgacc tgagcaagtt cgaaaaaac attgcaaaca 450  
 tgtgtcgtagg gattccaaca tacatggctg aggagatgca agaggcaagc 500  
 ctgtttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca atttttaaa 600  
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatggc 650  
tccagtggtt tttaccatgt cattctgaaa ttttctcta ctagttatgt 700  
ttgatttctt taagttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211  
<211> 185  
<212> PRT  
<213> Homo sapiens

<400> 211  
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu  
1 5 10 15  
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn  
20 25 30  
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
35 40 45  
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
50 55 60  
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
65 70 75  
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
80 85 90  
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
95 100 105  
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met  
110 115 120  
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
125 130 135  
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
140 145 150  
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
155 160 165  
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
170 175 180  
Asp Thr Val Glu Asn  
185

<210> 212  
<211> 1706  
<212> DNA  
<213> Homo sapiens

<400> 212  
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aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

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Glu Thr Ile Ala Cys Ala Cys Ile Tyr Leu Ala Ala Arg Ala Leu  
20 25 30

Gln Ile Pro Leu Pro Thr Arg Pro His Trp Phe Leu Leu Phe Gly  
35 40 45

Thr Thr Glu Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg  
50 55 60

Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu  
65 70 75

Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala  
80 85 90

Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly  
95 100 105

Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys  
110 115 120

Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys  
125 130 135

Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn  
140 145 150

Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala  
155 160 165

Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr  
170 175 180

Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr  
185 190 195

Ser Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro  
200 205 210

Arg Arg His His Asn His Gly Ser Pro His Leu Lys Ala Lys His  
215 220 225

Thr Arg Asp Asp Leu Lys Ser Ser Asn Arg His Gly His Lys Arg  
230 235 240

Lys Lys Ser Arg Ser Arg Ser Gln Ser Lys Ser Arg Asp His Ser  
245 250 255

Asp Ala Ala Lys Lys His Arg His Glu Arg Gly His His Arg Asp  
260 265 270

Arg Arg Glu Arg Ser Arg Ser Phe Glu Arg Ser His Lys Ser Lys

275

280

285

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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ggattgtaat atgaaattat taaaaggc ttcgctcata tatagggaaaa 200

tcgcatatgg tcctagtatt aaattttat tgcttactga ttttttgag 250

ttaagagttt ttatatgnta gaatatgagg atgtaaat aaataagaga 300

agaaaaaaaga ataaagtata ttgagtctcc aattttatgt aagcttcaga 350

agaactgggtt tgtttacatg caagcttata gttgaaatat ttttcagaa 400

ttacatgaat gacagtcttc gaaccaatgt gtttggcga tttcaaccag 450

agantatagc atgtgcttgc atctacctt cagnagagc acttcagatt 500

cggttgc当地 ctngtccccaa ttgggttctt cttttggta ctacagaaga 550

ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600

agccaaacta tgaattactg gaaaaagaag tagaaaaaaag aaaagttagcc 650

ttacaagaag ccnaattaaa agcaaaggaa ttgaatccgg atgaaactcc 700

agcccttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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ccaccctcat gcacaggctg gcccacact gctccttcgc gcgctggctg 150

ctctgttaacg gcagtttgc当地 ccgatacaag cacccgtctg aggaggagct 200

tcggggccctg gcgggaaagc cgaggcccag aggaggaaa gagcgggtggg 250

ccaatggcct tagtggaggag aagccactgt ctgtcccccg agatcccccg 300

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cttcttcctg gagtaccagt gtttgtga ctttgctgtg tactcggcg 400  
gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450  
gagactaaca ttgctgtgtt ctgggcctg ctcacggta ccttctccat 500  
caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggagggg 550  
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gcagtggtgg gctctgtgct gggtgccttc ctcacccctc caggcctgcg 800  
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tttttaa 1807

<210> 216

<211> 479  
<212> PRT  
<213> Homo sapiens

<400> 216  
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Thr Leu Met His Arg Leu Ala Pro His Cys Ser Phe Ala Arg Trp  
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Leu Leu Cys Asn Gly Ser Leu Phe Arg Tyr Lys His Pro Ser Glu  
35 40 45  
Glu Glu Leu Arg Ala Leu Ala Gly Lys Pro Arg Pro Arg Gly Arg  
50 55 60  
Lys Glu Arg Trp Ala Asn Gly Leu Ser Glu Glu Lys Pro Leu Ser  
65 70 75  
Val Pro Arg Asp Ala Pro Phe Gln Leu Glu Thr Cys Pro Leu Thr  
80 85 90  
Thr Val Asp Ala Leu Val Leu Arg Phe Phe Leu Glu Tyr Gln Trp  
95 100 105  
Phe Val Asp Phe Ala Val Tyr Ser Gly Gly Val Tyr Leu Phe Thr  
110 115 120  
Glu Ala Tyr Tyr Tyr Met Leu Gly Pro Ala Lys Glu Thr Asn Ile  
125 130 135  
Ala Val Phe Trp Cys Leu Leu Thr Val Thr Phe Ser Ile Lys Met  
140 145 150  
Phe Leu Thr Val Thr Arg Leu Tyr Phe Ser Ala Glu Glu Gly Gly  
155 160 165  
Glu Arg Ser Val Cys Leu Thr Phe Ala Phe Leu Phe Leu Leu  
170 175 180  
Ala Met Leu Val Gln Val Val Arg Glu Glu Thr Leu Glu Leu Gly  
185 190 195  
Leu Glu Pro Gly Leu Ala Ser Met Thr Gln Asn Leu Glu Pro Leu  
200 205 210  
Leu Lys Lys Gln Gly Trp Asp Trp Ala Leu Pro Val Ala Lys Leu  
215 220 225  
Ala Ile Arg Val Gly Leu Ala Val Val Gly Ser Val Leu Gly Ala  
230 235 240  
Phe Leu Thr Phe Pro Gly Leu Arg Leu Ala Gln Thr His Arg Asp  
245 250 255  
Ala Leu Thr Met Ser Glu Asp Arg Pro Met Leu Gln Phe Leu Leu  
260 265 270  
His Thr Ser Phe Leu Ser Pro Leu Phe Ile Leu Trp Leu Trp Thr  
275 280 285  
Lys Pro Ile Ala Arg Asp Phe Leu His Gln Pro Pro Phe Gly Glu

290

295

300

Thr Arg Phe Ser Leu Leu Ser Asp Ser Ala Phe Asp Ser Gly Arg  
305 310 315

Leu Trp Leu Leu Val Val Leu Cys Leu Leu Arg Leu Ala Val Thr  
320 325 330

Arg Pro His Leu Gln Ala Tyr Leu Cys Leu Ala Lys Ala Arg Val  
335 340 345

Glu Gln Leu Arg Arg Glu Ala Gly Arg Ile Glu Ala Arg Glu Ile  
350 355 360

Gln Gln Arg Val Val Arg Val Tyr Cys Tyr Val Thr Val Val Ser  
365 370 375

Leu Gln Tyr Leu Thr Pro Leu Ile Leu Thr Leu Asn Cys Thr Leu  
380 385 390

Leu Leu Lys Thr Leu Gly Gly Tyr Ser Trp Gly Leu Gly Pro Ala  
395 400 405

Pro Leu Leu Ser Pro Asp Pro Ser Ser Ala Ser Ala Ala Pro Ile  
410 415 420

Gly Ser Gly Glu Asp Glu Val Gln Gln Thr Ala Ala Arg Ile Ala  
425 430 435

Gly Ala Leu Gly Gly Leu Leu Thr Pro Leu Phe Leu Arg Gly Val  
440 445 450

Leu Ala Tyr Leu Ile Trp Trp Thr Ala Ala Cys Gln Leu Leu Ala  
455 460 465

Ser Leu Phe Gly Leu Tyr Phe His Gln His Leu Ala Gly Ser  
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<210> 217

<211> 574

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 5, 146

<223> unknown base

<400> 217

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gctggctgct ctgtaacggc agtttgtcc gataacaagca cccgtnttga 150

ggaggagctt cggggcctgg cggggaaagcc gagggccaga ggcaggaaag 200

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<210> 218

<211> 2571

<212> DNA

<213> Homo sapiens

<400> 218

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<211> 632  
<212> PRT  
<213> Homo sapiens

<400> 219  
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Asn Tyr Ile Asp Asn Val Gly Asn Leu His Phe Leu Tyr Ser Glu  
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Leu Cys Lys Gly Ala Ser His Tyr Gly Leu Thr Lys Asp Arg Lys  
35 40 45

Arg Arg Ser Gln Asp Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr  
50 55 60

Ala Thr Ala Pro Ser Pro Glu Val Ser Ala Ala Ala Thr Ile Ser  
65 70 75

Leu Met Thr Asp Glu Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser  
80 85 90

Ser Ala Glu Asp Gly Gln Pro Ala Ile Ser Pro Val Asp Ser Gly  
95 100 105

Arg Ser Asn Arg Thr Arg Ala Arg Pro Phe Glu Arg Ser Thr Ile  
110 115 120

Arg Ser Arg Ser Phe Lys Lys Ile Asn Arg Ala Leu Ser Val Leu  
125 130 135

Arg Arg Thr Lys Ser Gly Ser Ala Val Ala Asn His Ala Asp Gln  
140 145 150

Gly Arg Glu Asn Ser Glu Asn Thr Thr Ala Pro Glu Val Phe Pro  
155 160 165

Arg Leu Tyr His Leu Ile Pro Asp Gly Glu Ile Thr Ser Ile Lys  
170 175 180

Ile Asn Arg Val Asp Pro Ser Glu Ser Leu Ser Ile Arg Leu Val  
185 190 195

Gly Gly Ser Glu Thr Pro Leu Val His Ile Ile Ile Gln His Ile  
200 205 210

Tyr Arg Asp Gly Val Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly  
215 220 225

Asp Ile Ile Leu Lys Val Asn Gly Met Asp Ile Ser Asn Val Pro  
230 235 240

His Asn Tyr Ala Val Arg Leu Leu Arg Gln Pro Cys Gln Val Leu  
245 250 255

Trp Leu Thr Val Met Arg Glu Gln Lys Phe Arg Ser Arg Asn Asn  
260 265 270

Gly Gln Ala Pro Asp Ala Tyr Arg Pro Arg Asp Asp Ser Phe His  
275 280 285

Val Ile Leu Asn Lys Ser Ser Pro Glu Glu Gln Leu Gly Ile Lys  
290 295 300

Leu Val Arg Lys Val Asp Glu Pro Gly Val Phe Ile Phe Asn Val  
305 310 315

Leu Asp Gly Gly Val Ala Tyr Arg His Gly Gln Leu Glu Glu Asn

320	325	330
Asp Arg Val Leu Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser	
335	340	345
Pro Glu Ser Ala Ala His Leu Ile Gln Ala	Ser Glu Arg Arg Val	
350	355	360
His Leu Val Val Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile	
365	370	375
Phe Gln Glu Ala Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly	
380	385	390
Pro Gly Glu Arg Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile	
395	400	405
Thr Cys His Glu Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu	
410	415	420
Ser Leu Gly Met Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp	
425	430	435
Asp Leu Pro Ile Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile	
440	445	450
Ser Arg Asp Gly Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val	
455	460	465
Asp Gly Val Glu Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala	
470	475	480
Leu Leu Lys Arg Thr Ser Ser Ile	Val Leu Lys Ala Leu Glu	
485	490	495
Val Lys Glu Tyr Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala	
500	505	510
Leu Asp Ser Asn His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro	
515	520	525
Ser Trp Val Met Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys	
530	535	540
Lys Asp Ile Val Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe	
545	550	555
Cys Ile Val Gly Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe	
560	565	570
Phe Ile Lys Ser Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly	
575	580	585
Arg Ile Arg Cys Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser	
590	595	600
Thr Ser Gly Met Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu	
605	610	615
Leu Lys Gly Arg Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr	
620	625	630
Phe Leu		

<210> 220  
<211> 773  
<212> DNA  
<213> Homo sapiens

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gttttaaca tcatacagccc aagcaacaat ggtggcaatg ttcaggagac 200  
agtgacaatt gataatgaaa aaaataccgc catcgtaac atccatgcag 250  
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tccagggtgc tctccgaag agcctgctt atcctgaaga tggaccatca 350  
gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400  
ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaacct 450  
ctggagtctc tgatcaaaga cgtggattgg ttccctgctt ggtcacccat 500  
tgagaaactc tgcaaacata tccctttgtt taagggggaa gtggttgaaa 550  
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atcttggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650  
ctcttggaaa atctttcaa agaaatacat cttgggtta cactcaaaag 700  
tcaaattaaa ttcttccca atgccccaaac taattttagg attcagtcag 750  
aaaatataaa tgctgtatata 773

<210> 221  
<211> 184  
<212> PRT  
<213> Homo sapiens

<400> 221  
Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
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Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
20 25 30  
Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
35 40 45  
Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
50 55 60  
Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
65 70 75  
Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
95								100						105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
110								115						120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
125								130						135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
140								145						150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
155								160						165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
170								175						180

Asp Ile His Val

<210> 222  
<211> 992  
<212> DNA  
<213> Homo sapiens

<400> 222  
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acccaccgag gcatggggct ccctgggctg ttctgcttgg ccgtgctggc 100  
tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150  
ccattgccta caaagtccctg gaagtttcc ccaaaggccg ctgggtgctc 200  
ataacctgct gtgcacccca gccaccacccg cccatcacct attccctctg 250  
tggAACCAAG aacatcaagg tggccaagaa ggtggtaag acccacgagc 300  
cggcctccctt caacctcaac gtcacactca agtccagtcc agacctgctc 350  
acctacttct gccgggcgtc ctccacactca ggtgccatg tggacagtgc 400  
caggctacag atgcactggg agctgtggc caagccagtg tctgagctgc 450  
gggccaacctt cactctgcag gacagagggg caggccccag ggtggagatg 500  
atctgccagg cgtccctcggt cagcccaccc atcaccaaca gcctgatcgg 550  
gaaggatggg caggtccacc tgcagcagag accatgccac aggccgcctg 600  
ccaacttctc cttccctgccc agccagacat cggactggtt ctggtgccag 650  
gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgcccc 700  
aggtggtgac cagaagatgg aggactggca gggtcccctg gagagcccc 750  
tccttgcctt gccgctctac aggagcaccc gccgtctgag tgaagaggag 800  
tttgggggggt tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850  
agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggaa gttcatgcaa aatgagtgtg 950

tttttagctgc tcttgccaca aaaaaaaaaaaa aaaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser  
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Ile Thr Pro Val Val Ser  
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val  
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Pro Ile Thr Tyr  
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val  
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys  
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr  
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu  
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu  
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala  
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp  
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala  
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys  
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val  
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro  
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg  
230 235 240

Arg Leu Ser Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly  
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met  
260 265

<210> 224  
<211> 1297  
<212> DNA  
<213> Homo sapiens

<400> 224  
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cttctgtcc tgctgtccgg ctggcccgg gctgggcgag ccgaccctca 100  
ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150  
ggtgtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200  
gactgtggca acaagacagt cacacctgtc agtccccctgg ggaagaaact 250  
aaatgtcaca acggcctgga aagcacagaa cccagttactg agagaggtgg 300  
tggacatact tacagagcaa ctgcgtgaca ttcaagctgga gaattacaca 350  
cccaaggaac ccctcaccct gcaggcaagg atgtcttgtg agcagaaagc 400  
tgaaggacac agcagtggat cttggcagtt cagtttcgat gggcagatct 450  
tcctcctctt tgactcagag aagagaatgt ggacaacggc tcattcctgga 500  
gccagaaaaga tgaaagaaaa gtgggagaat gacaagggttg tggccatgtc 550  
cttccattac ttctcaatgg gagactgtat aggatggcctt gaggacttct 600  
tgatggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650  
atgtcctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700  
ttgctgcctc ctcatcatcc tccccctgctt catcctccct ggcattctgag 750  
gagagtcott tagagtgaca ggttaaagct gataccaaa ggctcctgtg 800  
agcacggctc tgatcaaact cgcccttctg tctggccagc tgcccacgac 850  
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900  
ccaatagctc attcaactgcc ttgattcctt ttgccaacaa ttttaccagc 950  
agttataacct aacatattat gcaattttctt cttggtgcta cctgatggaa 1000  
ttcctgcact taaagttctg gctgactaaa caagatataat cattttctt 1050  
cttctctttt tgtttggaaa atcaagttact tctttgaatg atgatcttt 1100  
tcttgcaaat gatattgtca gtaaaataat cacgttagac ttcagacctc 1150  
tggggattct ttccgtgtcc tgaaagagaa ttttaaattt attaataag 1200  
aaaaaaattta tattaatgtat tgtttccctt agtaatttat tgttctgtac 1250  
tgatatttaa ataaagagtt ctatccca aaaaaaaaaa aaaaaaaaa 1297

<210> 225  
<211> 246  
<212> PRT  
<213> Homo sapiens

<400> 225

Met	Ala	Ala	Ala	Ala	Thr	Lys	Ile	Leu	Leu	Cys	Leu	Pro	Leu	
1				5				10				15		
Leu	Leu	Leu	Leu	Ser	Gly	Trp	Ser	Arg	Ala	Gly	Arg	Ala	Asp	Pro
				20				25				30		
His	Ser	Leu	Cys	Tyr	Asp	Ile	Thr	Val	Ile	Pro	Lys	Phe	Arg	Pro
				35				40				45		
Gly	Pro	Arg	Trp	Cys	Ala	Val	Gln	Gly	Gln	Val	Asp	Glu	Lys	Thr
				50				55				60		
Phe	Leu	His	Tyr	Asp	Cys	Gly	Asn	Lys	Thr	Val	Thr	Pro	Val	Ser
				65				70				75		
Pro	Leu	Gly	Lys	Lys	Leu	Asn	Val	Thr	Thr	Ala	Trp	Lys	Ala	Gln
				80				85				90		
Asn	Pro	Val	Leu	Arg	Glu	Val	Val	Asp	Ile	Leu	Thr	Glu	Gln	Leu
				95				100				105		
Arg	Asp	Ile	Gln	Leu	Glu	Asn	Tyr	Thr	Pro	Lys	Glu	Pro	Leu	Thr
				110				115				120		
Leu	Gln	Ala	Arg	Met	Ser	Cys	Glu	Gln	Lys	Ala	Glu	Gly	His	Ser
				125				130				135		
Ser	Gly	Ser	Trp	Gln	Phe	Ser	Phe	Asp	Gly	Gln	Ile	Phe	Leu	Leu
				140				145				150		
Phe	Asp	Ser	Glu	Lys	Arg	Met	Trp	Thr	Thr	Val	His	Pro	Gly	Ala
				155				160				165		
Arg	Lys	Met	Lys	Glu	Lys	Trp	Glu	Asn	Asp	Lys	Val	Val	Ala	Met
				170				175				180		
Ser	Phe	His	Tyr	Phe	Ser	Met	Gly	Asp	Cys	Ile	Gly	Trp	Leu	Glu
				185				190				195		
Asp	Phe	Leu	Met	Gly	Met	Asp	Ser	Thr	Leu	Glu	Pro	Ser	Ala	Gly
				200				205				210		
Ala	Pro	Leu	Ala	Met	Ser	Ser	Gly	Thr	Thr	Gln	Leu	Arg	Ala	Thr
				215				220				225		
Ala	Thr	Thr	Leu	Ile	Leu	Cys	Cys	Leu	Leu	Ile	Ile	Leu	Pro	Cys
				230				235				240		
Phe	Ile	Leu	Pro	Gly	Ile									
				245										

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagccca tttcgaaaac ccatctatac aaactatata ttttcatttc 50

tgctgcttagc tgccttgggc ctcacaattt tcattctgtt ttctgacttt 100

caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

ggttttaatt ttgggtggtag ccctcaccca attctggtgt ggcttcctt 200  
gcagaggatt ccacacctcaa aatcatgaac tctggctgtt gatcaaaaaga 250  
gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300  
agcagaagac tcaacacctggc ctcccataaa caggacagat tattcaggtg 350  
atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400  
attccaaaaaa gaaaactcaa attgggagggc caacccacag aacagcattt 450  
ctgggccagg ctgtaatcag aattgtcgct gtacatgctc aacagcattt 500  
ctttttccc caaaattaac acattgtgga gaagtgtatga tactctcccc 550  
ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600  
aacacctgca gcaagggacc ttagataggc ttattctgac tgtatgctt 650  
accaatgaga gaaaaaaaaatg catttcctgt atcatcctt tcaataaaact 700  
gtattcattt tgaaaaaaaaaaaaaaaaaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

Met	Glu	Leu	Ile	Pro	Thr	Ile	Thr	Ser	Trp	Arg	Val	Leu	Ile	Leu
1									10					15
Val	Val	Ala	Leu	Thr	Gln	Phe	Trp	Cys	Gly	Phe	Leu	Cys	Arg	Gly
									25					30
Phe	His	Leu	Gln	Asn	His	Glu	Leu	Trp	Leu	Leu	Ile	Lys	Arg	Glu
									35					45
Phe	Gly	Phe	Tyr	Ser	Lys	Ser	Gln	Tyr	Arg	Thr	Trp	Gln	Lys	Lys
									50					60
Leu	Ala	Glu	Asp	Ser	Thr	Trp	Pro	Pro	Ile	Asn	Arg	Thr	Asp	Tyr
									65					75
Ser	Gly	Asp	Gly	Lys	Asn	Gly	Phe	Tyr	Ile	Asn	Gly	Gly	Tyr	Glu
									80					90
Ser	His	Glu	Gln	Ile	Pro	Lys	Arg	Lys	Leu	Lys	Leu	Gly	Gly	Gln
									95					105
Pro	Thr	Glu	Gln	His	Phe	Trp	Ala	Arg	Leu					
									110					115

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

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cacaccatga agctttgtg gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccggtcg tctacacctac ggcgcaagtg tggattctgt 150  
gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcccctcc 200  
gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgcgggg 250  
cctctccgag gtcccgagg gtattccctc gaacaccgg tacctaacc 300  
tcatggagaa caacatccag atgatccagg ccgacacctt cggccaccc 350  
caccacctgg aggtcctgca gttggcagg aactccatcc ggcagattga 400  
ggtgggggcc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450  
acaactggct gacagtcatc cctagcgggg ccttgaata cctgtccaag 500  
ctgcgggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550  
cgccctcaac cgggtgcct ccctcatgcg cctggacttg gggagactca 600  
agaagctgga gtatatctct gagggagctt ttgagggct gttcaaccc 650  
aagtatctga acttggcat gtcaacatt aaagacatgc ccaatctcac 700  
ccccctggtg gggctggagg agctggagat gtcagggAAC cacttccctg 750  
agatcaggcc tggctccccc catggcctga gctccctcaa gaagctctgg 800  
gtcatgaact cacaggtcag cctgatttag cggaatgctt ttgacgggct 850  
ggcttcactt gtgaaactca acttggccca caataaccc 1050  
ccatgaccc tttaccccg ctgaggtacc tggtgagtt gcatctacac 950  
cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctgggtggct 1000  
tcgagagtat atacccacca attccaccc 1100  
ccatgcacat gcgaggccgc tacctcggtt aggtggacca ggcctccccc 1150  
cagtgtctg ccccttcat catggacca cctcgagacc tcaacatttc 1200  
tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1250  
tgaagtgggtt gctggccaat gggacagtgc tcagccacgc ctccggccac 1300  
ccaaggatct ctgtcctcaa cgacggcacc ttgaacttt cccacgtgct 1350  
gcttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1400  
actccaaacgc ctggcctac ctcaatgtga gcacggctga gcttaacacc 1450  
tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1500  
gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1550  
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cgtgtgccc agcaggtggc agtaccccg acagacacca ctgacaagat 1650  
gcagaccaggc ctggatgaag tcatgaagac caccaagatc atcattggct 1700  
gctttgtggc agtgaactctg ctagctggccg ccatgttgat tgtcttcata 1750

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750  
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cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850  
cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900  
ggcccactgg acagaaaaca gcctgggaa ctctctgcac cccacagtca 1950  
ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000  
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tagaatgcac acaaagacag caactttgt acagagtggg gagagacttt 2100  
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attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn
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Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile
				20				25					30	
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn
	35							40					45	
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val
	50							55					60	
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser
	65							70					75	
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile
	80							85					90	
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln
	95							100					105	
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn
	110							115					120	
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu
	125							130					135	
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg
	140							145					150	
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr
	155							160					165	
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu
	170							175					180	
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu

185                    190                    195

Phe Asn Leu Lys Tyr Leu Asn Leu Gly Met Cys Asn Ile Lys Asp		
200	205	210
Met Pro Asn Leu Thr Pro Leu Val Gly Leu Glu Glu Leu Glu Met		
215	220	225
Ser Gly Asn His Phe Pro Glu Ile Arg Pro Gly Ser Phe His Gly		
230	235	240
Leu Ser Ser Leu Lys Lys Leu Trp Val Met Asn Ser Gln Val Ser		
245	250	255
Leu Ile Glu Arg Asn Ala Phe Asp Gly Leu Ala Ser Leu Val Glu		
260	265	270
Leu Asn Leu Ala His Asn Asn Leu Ser Ser Leu Pro His Asp Leu		
275	280	285
Phe Thr Pro Leu Arg Tyr Leu Val Glu Leu His Leu His His Asn		
290	295	300
Pro Trp Asn Cys Asp Cys Asp Ile Leu Trp Leu Ala Trp Trp Leu		
305	310	315
Arg Glu Tyr Ile Pro Thr Asn Ser Thr Cys Cys Gly Arg Cys His		
320	325	330
Ala Pro Met His Met Arg Gly Arg Tyr Leu Val Glu Val Asp Gln		
335	340	345
Ala Ser Phe Gln Cys Ser Ala Pro Phe Ile Met Asp Ala Pro Arg		
350	355	360
Asp Leu Asn Ile Ser Glu Gly Arg Met Ala Glu Leu Lys Cys Arg		
365	370	375
Thr Pro Pro Met Ser Ser Val Lys Trp Leu Leu Pro Asn Gly Thr		
380	385	390
Val Leu Ser His Ala Ser Arg His Pro Arg Ile Ser Val Leu Asn		
395	400	405
Asp Gly Thr Leu Asn Phe Ser His Val Leu Leu Ser Asp Thr Gly		
410	415	420
Val Tyr Thr Cys Met Val Thr Asn Val Ala Gly Asn Ser Asn Ala		
425	430	435
Ser Ala Tyr Leu Asn Val Ser Thr Ala Glu Leu Asn Thr Ser Asn		
440	445	450
Tyr Ser Phe Phe Thr Thr Val Thr Val Glu Thr Thr Glu Ile Ser		
455	460	465
Pro Glu Asp Thr Thr Arg Lys Tyr Lys Pro Val Pro Thr Thr Ser		
470	475	480
Thr Gly Tyr Gln Pro Ala Tyr Thr Ser Thr Thr Val Leu Ile		
485	490	495
Gln Thr Thr Arg Val Pro Lys Gln Val Ala Val Pro Ala Thr Asp		

500                    505                    510

Thr Thr Asp Lys Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr  
515                    520                    525

Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala  
530                    535                    540

Ala Ala Met Leu Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln  
545                    550                    555

Gln Arg Ser Thr Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln  
560                    565                    570

Val Asp Glu Asp Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala  
575                    580                    585

Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr  
590                    595                    600

Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly  
605                    610                    615

Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr  
620                    625                    630

Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys  
635                    640                    645

Asp Lys Val Gln Glu Thr Gln Ile  
650

<210> 230  
<211> 2846  
<212> DNA  
<213> Homo sapiens

<400> 230  
cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50  
tggggctcac ttttcttcag ctccttctca tctcgccctt gccaaaggagag 100  
tacacagtca ttaatgaagc ctgccctgga gcagagtggaa atatcatgtg 150  
tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaaga 200  
ggaaagtgcgt gggttataacc atcccttgcgt gcaggaatga ggagaatgag 250  
tgtgactcct gcctgatcca cccaggttgt accatcttg aaaactgcaa 300  
gagctgccga aatggctcat ggggggtac cttggatgac ttctatgtga 350  
aggggttcta ctgtcagag tgccgagcag gctggatcgg aggagactgc 400  
atgcgatgtg gccaggttct gcgagccccaa aagggtcaga ttttgttggaa 450  
aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500  
ggtttgcgt ccaactaaga tttgtcatgt tgagtctggaa gtttgactac 550  
atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgtatgg 600  
ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcactccac gtcctttcc actccgatgg ctccaagaat 700  
tttgcgggtt tccatgccat ttatgaggag atcacagcat gctcctcatc 750  
cccttggttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800  
agtgtgcctg cttggcaggc tatactggc agcgctgtga aaatctcctt 850  
gaagaaaagaa actgctcaga ccctggggc ccagtcaatg ggtaccagaa 900  
aataaacaggg ggccctgggc ttatcaacgg acgcccattgt aaaattggca 950  
ccgtgggtgc tttctttgt aacaactcct atgttcttag tggcaatgag 1000  
aaaagaactt gccagcagaa tggagagtgg tcagggaaac agcccatctg 1050  
cataaaagcc tgccgagaac caaagattc agacctggtg agaaggagag 1100  
ttcttccgat gcaggttcag tcaaggaga caccattaca ccagctatac 1150  
tcagcggcct tcagcaagca gaaactgcag agtgcctcta ccaagaagcc 1200  
agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataaccc 1250  
agctccagta tgagtgcatac tcacccttct accgcgcctt gggcagcagc 1300  
aggaggacat gtctgaggac tggaaagtgg agtgggcggg caccatcctg 1350  
catccctatac tgccccaaaa ttgagaacat cactgctcca aagacccaag 1400  
gtttgcgctg gccgtggcag gcagccatct acaggaggac cagcgggtg 1450  
catgacggca gcctacacaa gggagcgtgg ttcctagtct gcagcggtg 1500  
cctggtaat gagcgcactg tgggtggc tgccactgt gttactgacc 1550  
tggggaaagt caccatgatc aagacagcag acctgaaagt tgttttgggg 1600  
aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650  
gatttctgtc atcattctgc atcccaacta tgacccatc ctgcttgatg 1700  
ctgacatcgc catcctgaag ctcctagaca aggcccgtat cagcacccga 1750  
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gactcgctgc tgtgtgagga gcagcatgag gaccatggca tcccagtgag 1950  
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<210> 231

<211> 720

<212> PRT

<213> Homo sapiens

<400> 231

Met	Glu	Leu	Gly	Cys	Trp	Thr	Gln	Leu	Gly	Leu	Thr	Phe	Leu	Gln
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				20					25					30
Glu	Ala	Cys	Pro	Gly	Ala	Glu	Trp	Asn	Ile	Met	Cys	Arg	Glu	Cys
				35					40					45
Cys	Glu	Tyr	Asp	Gln	Ile	Glu	Cys	Val	Cys	Pro	Gly	Lys	Arg	Glu
				50					55					60
Val	Val	Gly	Tyr	Thr	Ile	Pro	Cys	Cys	Arg	Asn	Glu	Glu	Asn	Glu
				65					70					75
Cys	Asp	Ser	Cys	Leu	Ile	His	Pro	Gly	Cys	Thr	Ile	Phe	Glu	Asn
				80					85					90
Cys	Lys	Ser	Cys	Arg	Asn	Gly	Ser	Trp	Gly	Gly	Thr	Leu	Asp	Asp
				95					100					105
Phe	Tyr	Val	Lys	Gly	Phe	Tyr	Cys	Ala	Glu	Cys	Arg	Ala	Gly	Trp
				110					115					120
Tyr	Gly	Gly	Asp	Cys	Met	Arg	Cys	Gly	Gln	Val	Leu	Arg	Ala	Pro
				125					130					135
Lys	Gly	Gln	Ile	Leu	Leu	Glu	Ser	Tyr	Pro	Leu	Asn	Ala	His	Cys
				140					145					150
Glu	Trp	Thr	Ile	His	Ala	Lys	Pro	Gly	Phe	Val	Ile	Gln	Leu	Arg
				155					160					165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp  
 170 175 180  
 Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile  
 185 190 195  
 Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile  
 200 205 210  
 Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn  
 215 220 225  
 Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser  
 230 235 240  
 Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala  
 245 250 255  
 Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg  
 260 265 270  
 Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly  
 275 280 285  
 Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile  
 290 295 300  
 Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys  
 305 310 315  
 Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln  
 320 325 330  
 Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala  
 335 340 345  
 Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu  
 350 355 360  
 Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr  
 365 370 375  
 Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys  
 380 385 390  
 Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His  
 395 400 405  
 Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg  
 410 415 420  
 Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp  
 425 430 435  
 Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu  
 440 445 450  
 Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln  
 455 460 465  
 Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu  
 470 475 480

His Lys Gly Ala Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn  
485 490 495

Glu Arg Thr Val Val Val Ala Ala His Cys Val Thr Asp Leu Gly  
500 505 510

Lys Val Thr Met Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly  
515 520 525

Lys Phe Tyr Arg Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser  
530 535 540

Leu Gln Ile Ser Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile  
545 550 555

Leu Leu Asp Ala Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala  
560 565 570

Arg Ile Ser Thr Arg Val Gln Pro Ile Cys Leu Ala Ala Ser Arg  
575 580 585

Asp Leu Ser Thr Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly  
590 595 600

Trp Asn Val Leu Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp  
605 610 615

Thr Leu Arg Ser Gly Val Val Ser Val Val Asp Ser Leu Leu Cys  
620 625 630

Glu Glu Gln His Glu Asp His Gly Ile Pro Val Ser Val Thr Asp  
635 640 645

Asn Met Phe Cys Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile  
650 655 660

Cys Thr Ala Glu Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly  
665 670 675

Arg Ala Ser Pro Glu Pro Arg Trp His Leu Met Gly Leu Val Ser  
680 685 690

Trp Ser Tyr Asp Lys Thr Cys Ser His Arg Leu Ser Thr Ala Phe  
695 700 705

Thr Lys Val Leu Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys  
710 715 720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 233  
tgtcaaggac gcactgccgt catg 24

<210> 234  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 234  
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<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
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agctcaactt gaagcttct tcgcctgcagt gaagcagaga gatagatatt 100  
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150  
caaattccga ttactgttgc tggactttt gtgcctgaca gtggttgggt 200  
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250  
aaggagttca tggctaattt ccataagacc ctcattttgg ggaagggaaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400  
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagctt acagagggtc gccatcctcg 500  
ttccccacccg gaacagagag aaacacctga tgcacctgct ggaacatctg 550  
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atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700  
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tcccaagcat ctggtggttg gcaggaacag cactgggtac aggttagtt 800  
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850  
aaggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900  
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tgcctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgcacgagt 1050  
ctggagaaca gatgggttga gtagttgtc ttataaatta gtatctgtgg 1100  
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cagtgtatgcc caccagagaa tacattctt attagtttt aaagagttt 1850  
tgtaaaaatga tttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
acatattaac taataataaa tatgtctatc aaataacctct gtagtaaaat 1950  
gtgaaaaagc aaaa 1964

<210> 236  
<211> 344  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal peptide  
<222> 1-27  
<223> Signal peptide

<220>  
<221> N-glycosylation sites  
<222> 4-7, 220-223, 335-338  
<223> N-glycosylation sites

<220>  
<221> Xylose isomerase proteins  
<222> 191-201  
<223> Xylose isomerase proteins

<400> 236  
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Leu Leu Leu Leu Thr Leu Cys Leu Thr Val Val Gly Trp Ala Thr  
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 Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys  
                   35                  40                  45  
 Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly  
                   50                  55                  60  
 Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp  
                   65                  70                  75  
 Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu  
                   80                  85                  90  
 Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn  
                   95                  100                105  
 Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala  
                   110                115                120  
 Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys  
                   125                130                135  
 His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu Gln Arg  
                   140                145                150  
 Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu Gly  
                   155                160                165  
 Lys Lys Phe Asn Arg Ala Lys Leu Leu Asn Val Gly Tyr Leu Glu  
                   170                175                180  
 Ala Leu Lys Glu Glu Asn Trp Asp Cys Phe Ile Phe His Asp Val  
                   185                190                195  
 Asp Leu Val Pro Glu Asn Asp Phe Asn Leu Tyr Lys Cys Glu Glu  
                   200                205                210  
 His Pro Lys His Leu Val Val Gly Arg Asn Ser Thr Gly Tyr Arg  
                   215                220                225  
 Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg  
                   230                235                240  
 Glu Gln Phe Phe Lys Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly  
                   245                250                255  
 Trp Gly Gly Glu Asp Asp Asp Leu Arg Leu Arg Val Glu Leu Gln  
                   260                265                270  
 Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr  
                   275                280                285  
 Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Glu  
                   290                295                300  
 Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp  
                   305                310                315  
 Gly Leu Ser Ser Cys Ser Tyr Lys Leu Val Ser Val Glu His Asn  
                   320                325                330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala  
335 340

<210> 237

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

ccttaccta gaggccagag caagc 25

<210> 238

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 238

gagcttcatc cgttctgcgt tcacc 25

<210> 239

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 239

caggaatgta aagcttaca gagggtcgcc atcctcggt cccacc 46

<210> 240

<211> 2567

<212> DNA

<213> Homo sapiens

<400> 240

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gccgcagtcc tcgagactca gctgcattcc ctccgcgtcc gccccacgct 100

tctcccgctc cgggccccgc aatggcccg agcagtgtggt cgccgcctcg 150

ccgcatacctc tggcttgccct gcctcctgcc ctgggccccg gcaggggtgg 200

ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250

ggagcggtgg tgaccatctc gccagcctg gtggccaagg acaacggcag 300

cctggccctg cccgctgacg cccacctcta ccgcttccac tggatccaca 350

ccccgctggt gcttactggc aagatggaga agggtctcag ctccaccatc 400

cgtgtggtcg gccacgtgcc cggggaaattc ccggctctcg tctgggtcac 450

tgccgcgtac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500

tccccatcac agagttcctc gtgggggacc ttgttgtcac ccagaacact 550

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caccctctgg ggtcaggtgc tgctgccaga tgtgctgtgg gcctttcttg 1300  
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ccctccccac cccatctcag tgttaactga ctgctgactt ggagtttcca 1450  
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aagggtgtac acatagatgg gcacactcac agagagaagt gtgcacgtac 1900  
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cgtcacatgg gcatttcaga tgatcagctc tgtatctggta taagtcgggt 2000  
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agctactcg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500  
gcttgcagtg agccagatg gcgccactgc actccagcct gagtgacaga 2550  
gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu
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Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu
		20						25					30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala
			35				40						45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser
			50				55						60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile
			65				70						75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser
			80				85						90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val
			95				100						105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val
			110				115						120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly
			125				130						135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser
			140				145						150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp
			155				160						165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp
			170				175						180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr
			185				190						195	

Tyr Asn Tyr Ser Ile Ile Gly Thr Phe Thr Val Lys Leu Lys Val  
 200 205 210  
 Val Ala Glu Trp Glu Glu Val Glu Pro Asp Ala Thr Arg Ala Val  
 215 220 225  
 Lys Gln Lys Thr Gly Asp Phe Ser Ala Ser Leu Lys Leu Gln Glu  
 230 235 240  
 Thr Leu Arg Gly Ile Gln Val Leu Gly Pro Thr Leu Ile Gln Thr  
 245 250 255  
 Phe Gln Lys Met Thr Val Thr Leu Asn Phe Leu Gly Ser Pro Pro  
 260 265 270  
 Leu Thr Val Cys Trp Arg Leu Lys Pro Glu Cys Leu Pro Leu Glu  
 275 280 285  
 Glu Gly Glu Cys His Pro Val Ser Val Ala Ser Thr Ala Tyr Asn  
 290 295 300  
 Leu Thr His Thr Phe Arg Asp Pro Gly Asp Tyr Cys Phe Ser Ile  
 305 310 315  
 Arg Ala Glu Asn Ile Ile Ser Lys Thr His Gln Tyr His Lys Ile  
 320 325 330  
 Gln Val Trp Pro Ser Arg Ile Gln Pro Ala Val Phe Ala Phe Pro  
 335 340 345  
 Cys Ala Thr Leu Ile Thr Val Met Leu Ala Phe Ile Met Tyr Met  
 350 355 360  
 Thr Leu Arg Asn Ala Thr Gln Gln Lys Asp Met Val Glu Asn Pro  
 365 370 375  
 Glu Pro Pro Ser Gly Val Arg Cys Cys Cys Gln Met Cys Cys Gly  
 380 385 390  
 Pro Phe Leu Leu Glu Thr Pro Ser Glu Tyr Leu Glu Ile Val Arg  
 395 400 405  
 Glu Asn His Gly Leu Leu Pro Pro Leu Tyr Lys Ser Val Lys Thr  
 410 415 420

Tyr Thr Val

<210> 242  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 242  
 catttcctta ccctggaccc agctcc 26

<210> 243  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 243  
   gaaaggccca cagcacatct ggcag 25  
  
 <210> 244  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 244  
   ccacgaccgg agcaacttcc tcaagaccga cttgtttctc tacagc 46  
  
 <210> 245  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 245  
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   gctcccagat ctggccgct tgccctcctgc tcctcctcct cctcgccagc 100  
   ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
   gcaaccccaag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
   agaggcgaag gaggcgagac acccacttcc ccacatgtcat tttctgctgc 250  
   ggctgctgtc atcgatcaa gtgtggatg tgctgcaaga cgtagaacct 300  
   acctgccctg cccccgtccc ctcccttcct tatttattcc tgctgcccc 350  
   gaacataggt cttggaataa aatggctggt tctttgttt tccaaaaaaaa 400  
   aaaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaa 450  
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 <213> Homo sapiens  
  
 <400> 246  
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     20                   25                     30  
   Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
     35                   40                     45  
   Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp  
     50                   55                     60  
   Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
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Ser Lys Cys Gly Met Cys Cys Lys Thr  
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<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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ccttctcggtt ttcatcatag tgccagccat ttttggagtc tcctttggta 200

tccgcaaact ctacatgaaa agtctgttaa aaatcttgc gtgggctacc 250

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tcaaagagat tcgtcgaagt ggttagtagta aggctctgga caacactcca 400

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cattatggat gatgaggtga caaagagatt ctcagcagaa gaactggagt 500

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<211> 456  
<212> PRT  
<213> Homo sapiens

<400> 248  
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Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile  
20 25 30  
Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
35 40 45  
Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
50 55 60  
Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
65 70 75

Tyr Thr Asn Gly Ile Ile Ala Lys Asp Pro Thr Ser Leu Glu Glu  
                   80                  85                  90

Glu Ile Lys Glu Ile Arg Arg Ser Gly Ser Ser Lys Ala Leu Asp  
                   95                  100                  105

Asn Thr Pro Glu Phe Glu Leu Ser Asp Ile Phe Tyr Phe Cys Arg  
                   110                  115                  120

Lys Gly Met Glu Thr Ile Met Asp Asp Glu Val Thr Lys Arg Phe  
                   125                  130                  135

Ser Ala Glu Glu Leu Glu Ser Trp Asn Leu Leu Ser Arg Thr Asn  
                   140                  145                  150

Tyr Asn Phe Gln Tyr Ile Ser Leu Arg Leu Thr Val Leu Trp Gly  
                   155                  160                  165

Leu Gly Val Leu Ile Arg Tyr Cys Phe Leu Leu Pro Leu Arg Ile  
                   170                  175                  180

Ala Leu Ala Phe Thr Gly Ile Ser Leu Leu Val Val Gly Thr Thr  
                   185                  190                  195

Val Val Gly Tyr Leu Pro Asn Gly Arg Phe Lys Glu Phe Met Ser  
                   200                  205                  210

Lys His Val His Leu Met Cys Tyr Arg Ile Cys Val Arg Ala Leu  
                   215                  220                  225

Thr Ala Ile Ile Thr Tyr His Asp Arg Glu Asn Arg Pro Arg Asn  
                   230                  235                  240

Gly Gly Ile Cys Val Ala Asn His Thr Ser Pro Ile Asp Val Ile  
                   245                  250                  255

Ile Leu Ala Ser Asp Gly Tyr Tyr Ala Met Val Gly Gln Val His  
                   260                  265                  270

Gly Gly Leu Met Gly Val Ile Gln Arg Ala Met Val Lys Ala Cys  
                   275                  280                  285

Pro His Val Trp Phe Glu Arg Ser Glu Val Lys Asp Arg His Leu  
                   290                  295                  300

Val Ala Lys Arg Leu Thr Glu His Val Gln Asp Lys Ser Lys Leu  
                   305                  310                  315

Pro Ile Leu Ile Phe Pro Glu Gly Thr Cys Ile Asn Asn Thr Ser  
                   320                  325                  330

Val Met Met Phe Lys Lys Gly Ser Phe Glu Ile Gly Ala Thr Val  
                   335                  340                  345

Tyr Pro Val Ala Ile Lys Tyr Asp Pro Gln Phe Gly Asp Ala Phe  
                   350                  355                  360

Trp Asn Ser Ser Lys Tyr Gly Met Val Thr Tyr Leu Leu Arg Met  
                   365                  370                  375

Met Thr Ser Trp Ala Ile Val Cys Ser Val Trp Tyr Leu Pro Pro  
                   380                  385                  390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg  
395 400 405  
Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu  
410 415 420  
Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
425 430 435  
Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
440 445 450  
Lys Asp Arg Ser Arg Ser  
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<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

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catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200  
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agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400  
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gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

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His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly  
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu  
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala  
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr  
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys  
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn  
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly  
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His  
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly  
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser  
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly  
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe  
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu  
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr  
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro  
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 251  
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<210> 252  
<211> 1076  
<212> DNA  
<213> Homo sapiens

<400> 252  
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gcctctggac ccgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150  
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<210> 253  
<211> 335  
<212> PRT  
<213> Homo sapiens

<400> 253  
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Ser	Ala	Ala	Ser
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Gly	Ser	Val	Gly
Gly	Ala	Val	Thr
35	40	45	
Lys	Gln	Val	Asp
Ser	Ile	Val	Trp
50	55	60	
Val	Thr	Ile	Gln
Pro	Glu	Gly	Gly
65	70	75	
Arg	Asn	Arg	Glu
Arg	Val	Asp	Phe
80	85	90	
Lys	Leu	Ser	Lys
Leu	Lys	Lys	Asn
95	100	105	
Gly	Ile	Tyr	Ser
Ser	Ser	Leu	Gln
110	115	120	
Val	Leu	His	Val
Tyr	Glu	His	Leu
125	130	135	
Gly	Leu	Gln	Ser
Asn	Lys	Asn	Gly
140	145	150	
Cys	Cys	Met	Glu
His	Gly	Glu	Asp
155	160	165	
Ala	Leu	Gly	Gln
Ala	Ala	Asn	Glu
170	175	180	
Pro	Ile	Ser	Trp
Arg	Trp	Gly	Glu
185	190	195	
Val	Ala	Arg	Asn
Pro	Val	Ser	Arg
200	205	210	
Ala	Arg	Lys	Leu
Cys	Glu	Gly	Ala
215	220	225	
Met	Val	Leu	Leu
Cys	Leu	Leu	Val
230	235	240	
Phe	Val	Leu	Gly
Leu	Phe	Leu	Trp
245	250	255	
Glu	Glu	Tyr	Ile
Glu	Glu	Lys	Lys
260	265	270	
Thr	Pro	Asn	Ile
Cys	Pro	His	Ser
275	280	285	
Thr	Ile	Pro	His
Thr	Asn	Arg	Thr
Ile	Leu	Lys	Glu
290	295	300	
Asn	Thr	Val	Tyr
Ser	Thr	Val	Glu
305	310	315	
Pro	His	Ser	Leu
Leu	Leu	Thr	Met
Met	Pro	Asp	Thr
Asp	Pro	Arg	Leu
	Phe	Ala	

320

325

330

Tyr Glu Asn Val Ile  
335

<210> 254

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 254

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aaa 1053

<210> 255

<211> 860

<212> DNA

<213> Homo sapiens

<400> 255

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aagaagctag ttctacggga aggaactta atgtagaaaa gattaatggg 150  
gaatggcata ctattatcct gcctctgac aaaagagaaa agatagaaga 200  
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250  
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acctcatcaa gaatcaaaga cttctttaaa ttttcttttg atacaccctt 800  
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<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

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Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
								20		25				30

Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
									35		40			45

Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
									50		55			60

Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
									65		70			75

Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
									80		85			90

Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
									95		100			105

Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
									110		115			120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met  
125 130 135  
Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu  
140 145 150  
Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn  
155 160 165  
Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu  
170 175 180

<210> 257  
<211> 766  
<212> DNA  
<213> Homo sapiens

<400> 257  
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ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150  
tctcaaaaacc ccatcttgc ctttgagtgg tggttcccag gaattatagg 200  
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cagtcagata gtcatcggtt tccttggctg tctgtgtgga gtctctaagc 700  
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gtttggaaaaa aaaaaaa 766

<210> 258  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 258  
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Leu Val Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
20 25 30  
Ile Val Ser Leu Val Glu Asp Gln Phe Ser Gln Asn Pro Ile

35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu		
50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg		
65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe		
80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser		
95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser		
110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp		
125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser		
140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr		
155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu		
170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu		
185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile		
200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg		
215	220	225
Ser Gln Ile Val		

<210> 259  
<211> 434  
<212> DNA  
<213> Homo sapiens

<400> 259  
gtcgaatcca aatcaactcat tgtgaaagct gagctcacag ccgaataagc 50  
caccatgagg ctgtcagtgt gtctcctgat ggtctcgctg gccctttgct 100  
gctaccaggc ccatgctctt gtctgccag ctgttgcttc tgagatcaca 150  
gtcttcttat tcttaagtga cgctgcggtt aacctccaag ttgccaaact 200  
taatccaccc ccagaagctc ttgcagccaa gttggaaagtg aagcactgca 250  
ccgatcagat atcttttaag aaacgactct cattgaaaaaa gtcctggtgg 300  
aaatagtcaa aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350  
tccaaagtc ttcaacgaca ccctgatctt cactaaaaat tgtaaagggtt 400

tcaacacgtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys  
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln  
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu  
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu  
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys  
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcca gctcaggtaa gccctcgcca aggtgaccc 50

gcaggacact ggtgaaggag cagtggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgttag cctggagcag atccgtgggc tgcagacccc 150

cgcggcaggtaa cctctcccccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagttagc cctggccctt ctcctactgg caggcctgac tgccttgaa 250

gccaatgacc catttgccaa taaagacat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggtcctg gccattgctg 350

ggatcgccgc agttctgagt ggcaaattgca aatacaagag cagccagaag 400

cagcacatgc ctgtacactga gaaggccatc ccactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccaggatg gcctgaagcc 500

taacactggc ccccagcacc tcctccctg ggaggccta tcctcaagga 550

aggacttctc tccaaggca ggctgttagg ccccttctg atcaggaggc 600

ttctttatga attaaactcg cccccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262  
Met Glu Arg Val Thr Leu Ala Leu Leu Leu Ala Gly Leu Thr  
1 5 10 15  
Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe  
20 25 30  
Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
35 40 45  
Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
50 55 60  
Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
65 70 75  
Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
80 85

<210> 263  
<211> 1676  
<212> DNA  
<213> Homo sapiens

<400> 263  
ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50  
ctgagcctgc cctggctggg cctcagaccc gtggcaatgt ccccatggct 100  
actcctgctg ctgggtgtgg gctcctggct actcgccgc atcctggctt 150  
ggacctatgc cttctataac aactgccccc ggctccagtg tttcccacag 200  
cccccaaaac ggaactggtt ttggggtcac ctgggcctga tcactcctac 250  
agaggagggc ttgaaggact cgacccagat gtccggccacc tattcccagg 300  
gctttacggt atggctgggt cccatcatcc cttcatcgat tttatgccac 350  
cctgacaccca tccggcttat caccaatgcc tcagctgccca ttgcacccaa 400  
ggataatotc ttcatcaggt tcctgaagcc ctggctggga gaaggatac 450  
tgctgagtgg cggtgacaag tggagccccc accgtcgat gctgacgccc 500  
gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550  
tgcaaacatc atgcttgaca agtggcagca cttggcctca gagggcagca 600  
gtcgtctgga catgtttagt cacatcagcc tcatgacctt ggacagtcta 650  
cagaaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700  
atataattgcc accatcttgg agtcagtgc cttgttagag aaaagaagcc 750  
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800  
cgccgccttcc acagggcctg ccgcctggtg catgacttca cagacgttgt 850  
catccgggag cgccgtcgca ccctccccac tcagggtatt gatgattttt 900  
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagac 1000  
agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050  
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100  
tgccgacagg aggtgcaaga gcttctgaag gaccgcgatc ctaaagagat 1150  
tgaatggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200  
agagcctgag gttacatccc ccagctccct tcacatccccg atgctgcacc 1250  
caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300  
cctcatcgat attatagggg tccatcacaa cccaaactgtg tggccggatc 1350  
ctgaggtcta cgacccttc cgcttgacc cagagaacag caaggggagg 1400  
tcacctctgg cttttattcc tttctccgca gggcccagga actgcacatcg 1450  
gcaggcggttc gccatggcgg agatgaaaagt ggtcctggcg ttgatgctgc 1500  
tgcacttccg gttcctgcca gaccacactg agcccccgcag gaagctggaa 1550  
ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccccgtaa 1600  
tgtaggctt cagtgacttt ctgacccatc cacctgtttt tttgcagatt 1650  
gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
1					5				10				15	

Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu	
				20				25					30	

Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
				35				40					45	

Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
				50				55					60	

Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
				65				70					75	

Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
				80					85				90	

Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
				95				100					105	

Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
				110				115					120	

Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
				125				130					135	

Ile Leu Leu Ser Gly Gly Asp Lys Trp Ser Arg His Arg Arg Met  
 140 145 150  
 Leu Thr Pro Ala Phe His Phe Asn Ile Leu Lys Ser Tyr Ile Thr  
 155 160 165  
 Ile Phe Asn Lys Ser Ala Asn Ile Met Leu Asp Lys Trp Gln His  
 170 175 180  
 Leu Ala Ser Glu Gly Ser Ser Arg Leu Asp Met Phe Glu His Ile  
 185 190 195  
 Ser Leu Met Thr Leu Asp Ser Leu Gln Lys Cys Ile Phe Ser Phe  
 200 205 210  
 Asp Ser His Cys Gln Glu Arg Pro Ser Glu Tyr Ile Ala Thr Ile  
 215 220 225  
 Leu Glu Leu Ser Ala Leu Val Glu Lys Arg Ser Gln His Ile Leu  
 230 235 240  
 Gln His Met Asp Phe Leu Tyr Tyr Leu Ser His Asp Gly Arg Arg  
 245 250 255  
 Phe His Arg Ala Cys Arg Leu Val His Asp Phe Thr Asp Ala Val  
 260 265 270  
 Ile Arg Glu Arg Arg Arg Thr Leu Pro Thr Gln Gly Ile Asp Asp  
 275 280 285  
 Phe Phe Lys Asp Lys Ala Lys Ser Lys Thr Leu Asp Phe Ile Asp  
 290 295 300  
 Val Leu Leu Leu Ser Lys Asp Glu Asp Gly Lys Ala Leu Ser Asp  
 305 310 315  
 Glu Asp Ile Arg Ala Glu Ala Asp Thr Phe Met Phe Gly Gly His  
 320 325 330  
 Asp Thr Thr Ala Ser Gly Leu Ser Trp Val Leu Tyr Asn Leu Ala  
 335 340 345  
 Arg His Pro Glu Tyr Gln Glu Arg Cys Arg Gln Glu Val Gln Glu  
 350 355 360  
 Leu Leu Lys Asp Arg Asp Pro Lys Glu Ile Glu Trp Asp Asp Leu  
 365 370 375  
 Ala Gln Leu Pro Phe Leu Thr Met Cys Val Lys Glu Ser Leu Arg  
 380 385 390  
 Leu His Pro Pro Ala Pro Phe Ile Ser Arg Cys Cys Thr Gln Asp  
 395 400 405  
 Ile Val Leu Pro Asp Gly Arg Val Ile Pro Lys Gly Ile Thr Cys  
 410 415 420  
 Leu Ile Asp Ile Ile Gly Val His His Asn Pro Thr Val Trp Pro  
 425 430 435  
 Asp Pro Glu Val Tyr Asp Pro Phe Arg Phe Asp Pro Glu Asn Ser  
 440 445 450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro

455

460

465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val

470

475

480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His

485

490

495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly

500

505

510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln

515

520

<210> 265

<211> 584

<212> DNA

<213> Homo sapiens

<400> 265

caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50

ctggcctcct gctgtttgct tttcacagga ttcttaaatc ctctcttatac 100

tcttcctctc cttgactcca gggaaatatac ctttcaactc tcagcaccc 150

atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200

cagatattgc cagagatgct gggtgcagaa agagggata ttctcaggaa 250

agcagactca agtaccaaca ttttaaccc aagaggaaat ttgagaaagt 300

ttcaggattt ctctggacaa gatcctaaca ttttactgag tcatctttg 350

gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400

gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450

accatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagt 500

tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550

aatcctctat gtttgcaca aaaaaaaaaa aaaa 584

<210> 266

<211> 124

<212> PRT

<213> Homo sapiens

<400> 266

Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu

1

5

10

15

Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser

20

25

30

Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu

35

40

45

Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu

50

55

60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr  
 65 70 75  
 Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe  
 80 85 90  
 Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg  
 95 100 105  
 Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp  
 110 115 120  
 Lys Tyr Cys Val

<210> 267  
 <211> 654  
 <212> DNA  
 <213> Homo sapiens

<400> 267  
 gaacattttt agttcccaag gaatgtacat cagccccacg gaagcttaggc 50  
 cacctctggg atgggggtgc tggtttaaaa caaacgccag tcatcctata 100  
 taaggacctg acagccacca ggcaccacct ccggccaggaa ctgcaggccc 150  
 acctgtctgc aaccctcgatg aggccatgcc ctccccaggg accgtctgca 200  
 gcctcctgct cctcggcatg ctctggctgg acttggccat ggcaggctcc 250  
 agcttcctga gccctgaaca ccagagatgc cagcagagaa aggagtcgaa 300  
 gaagccacca gccaagctgc agccccgagc tctagcaggc tggctccgcc 350  
 cggaaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
 ttcaacgccc ccttgatgt tggaatcaag ctgtcagggg ttcagtacca 450  
 gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500  
 aggccaaaga ggccccagcc gacaagtgtat cgccccacaag ccttactcac 550  
 ctctctctaa gtttagaagc gctcatctgg ctttcgctt gcttctgcag 600  
 caactcccac gactgttgta caagctcagg aggcaataa atgttcaaac 650  
 tgta 654

<210> 268  
 <211> 117  
 <212> PRT  
 <213> Homo sapiens

<400> 268  
 Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met  
 1 5 10 15  
 Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
 20 25 30  
 Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
 35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55				60	
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70				75	
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85				90	
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100				105	
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269  
<211> 1332  
<212> DNA  
<213> Homo sapiens

<400> 269  
cggccacagc tggcatgctc tgcctgatcg ccatcctgct gtatgtcctc 50  
gtccaggtaacc tcgtgaaccc cggggtgctc cgacacggacc ccagatgtca 100  
agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcagggt 150  
cagaccctga tagtcgtgat catcggatg ctcgtgctcc tgctggactt 200  
tcttggcttg gtgcacctgg gccagctgct catcttccac atctacacctga 250  
gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300  
gctgctcatc ttacacctct acttgagttat gtccctaacc ctgagccccc 350  
cacgcctggg gccagagtct ttgtcccccg tgtgcgcatt tgttcagggt 400  
cagcctctcc cagaagttag atcatggaca aaaaggcaa atcacaggaa 450  
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500  
gccgagacct gcaggaggatgg tgccaggatgc ttgaagtaac aagttaaaa 550  
tgttcagaga caatggatg gaatctatta ggcaagaaca ggacattatg 600  
aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650  
aaatatatta caggcaggatc acccactaac caaacaactg aagcgagagc 700  
tgtggtcttg cttggtctca cagtggcac agcgtaggc ggtcagtcatt 750  
tttgctgaac gacggagggt aaactccccca gccccaaagaa aacctgtgtt 800  
ggaagtaaca acaacacctcc tgctcctggc accagccgtt ttggtcatgg 850  
tgggccagct gcaaagcgatc ttccattctc tggcagtgg tggcccccgg 900  
gctgtggct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950  
aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000  
tcagggcaga gggagttggg tgggtcaggc tctggcattca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100  
acacacccca ccaagagcct cttgttcat aaccacaggt taccctacaa 1150  
accactgtcc ccacacacaacc ctggggatgt tttaaaacac acacctctaa 1200  
cgcatatctt acagtcactg ttgtcttgcc tgagggttga attttttta 1250  
atgaaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270  
<211> 142  
<212> PRT  
<213> Homo sapiens

<400> 270  
Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val  
1 5 10 15  
Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu  
20 25 30  
Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His  
35 40 45  
Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln  
50 55 60  
Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr  
65 70 75  
Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val  
80 85 90  
Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu  
95 100 105  
Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met  
110 115 120  
Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro  
125 130 135  
Ala Gly Val Val Pro Gly Ala  
140

<210> 271  
<211> 1484  
<212> DNA  
<213> Homo sapiens

<400> 271  
ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50  
accatggcca agatggagct ctcgaaggcc ttctctggcc agcggacact 100  
cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150  
tgctcagcaa ctactggttt gtgggcacac agaagggtgcc caagccccctg 200  
tgcgagaaaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300  
ctggggatga ccgggtctcc ttccggagct tccggagtgg catgtggcta 350  
tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400  
tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450  
ccacgttgca aggcccattgt caccccaactc tccgatttg aggaaagcgg 500  
ttgatggaga aggctccct cccctccccct cccttggggc tttgtggcaa 550  
aaatcctatg gttatccctg ggaacgcaga tcacccatcg cgacttcaa 600  
ttcatcagct tcctcctgct actaacagac ttgctactca ctggaaaccc 650  
tgccctgtggg ctcaaactga gcgccttgc tgctgtttcc tctgtcctgt 700  
caggtctccct ggggatggtg gcccacatga tgtattcaca agtcttccaa 750  
gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800  
tggctgggcc ttctacatgg cctggctctc cttcacctgc tgcacggcgt 850  
cggtgtcac caccccaac acgtacacca ggatgggtcg ggagttcaag 900  
tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950  
ccatcagtgt ttccctcgcc ggctgtcaag tgcaaaaaacc accgtgggtc 1000  
ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050  
gagggagtcg acttctactc cgagctgcgg aacaaggat ttcaaagagg 1100  
ggccagccag gagctgaaag aagcagttag gtcacatgtgta gaggaagagc 1150  
agtgttagga gttaagcggg tttggggagt aggcttgagc cctacccat 1200  
acgtctgtcg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250  
atggttttta gaggctacga ataaggctat gaataagggt tatcttaag 1300  
tcctaaggga ttccctgggtg ccactgctct ctccctct acagctccat 1350  
cttggttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400  
gatagtttct gtgcaggtt ctgggctaaa ccatggagat aaaaagaaga 1450  
gtaaaataca cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr  
1 5 10 15

Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr  
20 25 30

Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

35	40	45
Pro Lys Pro Leu Cys Glu Lys Gly Leu Ala Ala Lys Cys Phe Asp		
50	55	60
Met Pro Val Ser Leu Asp Gly Asp Thr Asn Thr Ser Thr Gln Glu		
65	70	75
Val Val Gln Tyr Asn Trp Glu Thr Gly Asp Asp Arg Phe Ser Phe		
80	85	90
Arg Ser Phe Arg Ser Gly Met Trp Leu Ser Cys Glu Glu Thr Val		
95	100	105
Glu Glu Pro Gly Glu Arg Cys Arg Ser Phe Ile Glu Leu Thr Pro		
110	115	120
Pro Ala Lys Arg Gly Glu Lys Gly Leu Leu Glu Phe Ala Thr Leu		
125	130	135
Gln Gly Pro Cys His Pro Thr Leu Arg Phe Gly Gly Lys Arg Leu		
140	145	150
Met Glu Lys Ala Ser Leu Pro Ser Pro Pro Leu Gly Leu Cys Gly		
155	160	165
Lys Asn Pro Met Val Ile Pro Gly Asn Ala Asp His Leu His Arg		
170	175	180
Thr Ser Ile His Gln Leu Pro Pro Ala Thr Asn Arg Leu Ala Thr		
185	190	195
His Trp Glu Pro Cys Leu Trp Ala Gln Thr Glu Arg Leu Cys Cys		
200	205	210
Cys Phe Leu Cys Pro Val Arg Ser Pro Gly Asp Gly Gly Pro His		
215	220	225
Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg		
230	235	240
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His		
245	250	255
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His		
260	265	270
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala		
275	280	285

<210> 273  
 <211> 1158  
 <212> DNA  
 <213> Homo sapiens

<400> 273  
 aactggaagg aaagaaaagaa aggtcagctt tggcccatat gtggttaccc 50  
 cttggcttcc tgtctttatg tctttctcct cttctatcc tgcatactcc 100  
 ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150  
 ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgttcc 200

accAACcagg gtagtggcat ggAGCACCgt aaccatctgt gcttctgtga 250  
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atctggcatg agatggcaca ggtgaccacg cagaAGCCAC cagaatctt 350  
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cagCCTCCCC Gtagccatct ccaggGTGAC ggaACCCAGT gtattACCTG 1050  
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cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

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Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20				25					30	

Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40				45	

Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50				55				60		

Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
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Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
				80				85						

<210> 275  
<211> 2694  
<212> DNA  
<213> Homo sapiens

<400> 275  
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gatacagatg ctagttagtaa cgcttgtaag gaacttgcca tctttcttac 300  
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35

40

45

Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp		
50	55	60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr		
65	70	75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg		
80	85	90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly		
95	100	105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe		
110	115	120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp		
125	130	

&lt;210&gt; 277

&lt;211&gt; 4104

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 277

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<210> 278  
<211> 522  
<212> PRT  
<213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln
				20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Pro	Gln	Leu	Cys	Arg	Cys	
								35		40				45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala
					50				55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn
					65				70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln
					80				85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln
					95				100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu
					110				115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro
					125				130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln
					140				145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr
					155				160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile
					170				175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn
					185				190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys
					200				205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn
					215				220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu
					230				235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val
					245				250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr
					260				265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu
					275				280					285

Gln Leu Asp Ser Asn Arg Leu Thr Tyr Ile Glu Pro Arg Ile Leu  
 290 295 300  
 Asn Ser Trp Lys Ser Leu Thr Ser Ile Thr Leu Ala Gly Asn Leu  
 305 310 315  
 Trp Asp Cys Gly Arg Asn Val Cys Ala Leu Ala Ser Trp Leu Ser  
 320 325 330  
 Asn Phe Gln Gly Arg Tyr Asp Gly Asn Leu Gln Cys Ala Ser Pro  
 335 340 345  
 Glu Tyr Ala Gln Gly Glu Asp Val Leu Asp Ala Val Tyr Ala Phe  
 350 355 360  
 His Leu Cys Glu Asp Gly Ala Glu Pro Thr Ser Gly His Leu Leu  
 365 370 375  
 Ser Ala Val Thr Asn Arg Ser Asp Leu Gly Pro Pro Ala Ser Ser  
 380 385 390  
 Ala Thr Thr Leu Ala Asp Gly Gly Glu Gly Gln His Asp Gly Thr  
 395 400 405  
 Phe Glu Pro Ala Thr Val Ala Leu Pro Gly Gly Glu His Ala Glu  
 410 415 420  
 Asn Ala Val Gln Ile His Lys Val Val Thr Gly Thr Met Ala Leu  
 425 430 435  
 Ile Phe Ser Phe Leu Ile Val Val Leu Val Leu Tyr Val Ser Trp  
 440 445 450  
 Lys Cys Phe Pro Ala Ser Leu Arg Gln Leu Arg Gln Cys Phe Val  
 455 460 465  
 Thr Gln Arg Arg Lys Gln Lys Gln Lys Gln Thr Met His Gln Met  
 470 475 480  
 Ala Ala Met Ser Ala Gln Glu Tyr Tyr Val Asp Tyr Lys Pro Asn  
 485 490 495  
 His Ile Glu Gly Ala Leu Val Ile Ile Asn Glu Tyr Gly Ser Cys  
 500 505 510  
 Thr Cys His Gln Gln Pro Ala Arg Glu Cys Glu Val  
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<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

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<210> 281  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 281  
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20 25 30  
Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly  
35 40 45  
Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val  
50 55 60  
Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly  
65 70 75  
Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val  
80 85 90  
Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg  
95 100 105  
Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser  
110 115 120  
Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val  
125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe  
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser  
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala  
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro  
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly  
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Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala  
215 220 225

Leu Leu Gln Pro

<210> 282

<211> 644

<212> DNA

<213> Homo sapiens

<400> 282

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cctcatgtac ctgtttccctc tctggatgtt gtcccactga attcccatgaa 550

atacaaacctt attcagcaac agcaaaaaaaaaaaaaaaa 600

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<210> 283

<211> 77

<212> PRT

<213> Homo sapiens

<400> 283

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Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe		
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Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys		
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Leu Ala		

<210> 284  
<211> 2623  
<212> DNA  
<213> Homo sapiens

<400> 284  
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<211> 477  
<212> PRT  
<213> Homo sapiens

<400> 285

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Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asp Tyr Leu Tyr Lys  
35 40 45

Val Pro Thr Pro His Phe His Tyr Ile Met Lys Tyr Gly Val His  
50 55 60

Val Lys Gln Val Thr Asn Val Phe Ile Thr Lys Thr Tyr Pro Asn  
65 70 75

His Tyr Thr Leu Val Thr Gly Leu Phe Ala Glu Asn His Gly Ile  
80 85 90

.

Val Ala Asn Asp Met Phe Asp Pro Ile Arg Asn Lys Ser Phe Ser  
95 100 105

Leu Asp His Met Asn Ile Tyr Asp Ser Lys Phe Trp Glu Glu Ala  
110 115 120

Thr Pro Ile Trp Ile Thr Asn Gln Arg Ala Gly His Thr Ser Gly  
125 130 135

Ala Ala Met Trp Pro Gly Thr Asp Val Lys Ile His Lys Arg Phe  
140 145 150

Pro Thr His Tyr Met Pro Tyr Asn Glu Ser Val Ser Phe Glu Asp  
155 160 165

Arg Val Ala Lys Ile Val Glu Trp Phe Thr Ser Lys Glu Pro Ile  
170 175 180

Asn Leu Gly Leu Leu Tyr Trp Glu Asp Pro Asp Asp Met Gly His  
185 190 195

His Leu Gly Pro Asp Ser Pro Leu Met Gly Pro Val Ile Ser Asp  
200 205 210

Ile Asp Lys Lys Leu Gly Tyr Leu Ile Gln Met Leu Lys Lys Ala  
215 220 225

Lys Leu Trp Asn Thr Leu Asn Leu Ile Ile Thr Ser Asp His Gly  
230 235 240

Met Thr Gln Cys Ser Glu Glu Arg Leu Ile Glu Leu Asp Gln Tyr  
245 250 255

Leu Asp Lys Asp His Tyr Thr Leu Ile Asp Gln Ser Pro Val Ala  
260 265 270

Ala Ile Leu Pro Lys Glu Gly Lys Phe Asp Glu Val Tyr Glu Ala  
275 280 285

Leu Thr His Ala His Pro Asn Leu Thr Val Tyr Lys Glu Asp

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr Asn Ser Arg Ile Gln Pro		
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp His Ile Leu Gln Asn Lys		
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Ser Asp Asp Phe Leu Leu Gly Asn His Gly Tyr Asp Asn Ala Leu		
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala His Gly Pro Ala Phe Arg		
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn Ser Thr Asp Leu Tyr Pro		
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr Ala Met Pro His Asn Gly		
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu Asn Ser Ala Met Pro Arg		
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile Leu Leu Pro Gly Ser Val		
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly Ser Tyr Pro Tyr Phe Ile		
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val Ile Val Phe Phe Val Ile		
440	445	450
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<211> 1337  
<212> DNA  
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<211> 255

<212> PRT

<213> Homo sapiens

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Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp  
35 40 45

Glu Asn Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr  
50 55 60

Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Ala Pro Asp Val Ala  
65 70 75

Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly  
80 85 90

Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile  
95 100 105

Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu  
110 115 120

Ile Leu Asp Leu Lys Ile Ile Gln Pro Asp Lys Asn Asn Tyr Ala

125

130

135

Ala Met Val Phe His Tyr Met Ser Ile Thr Ile Leu Val Phe Phe  
140 145 150

Met Met Glu Ile Ile Phe Lys Leu Phe Val Phe Arg Leu Ser Ser  
155 160 165

Phe Thr Thr Ser Leu Arg Ser Trp Met Pro Val Val Val Val  
170 175 180

Ser Phe Ile Leu Asp Ile Val Leu Leu Phe Gln Glu His Gln Phe  
185 190 195

Glu Ala Leu Gly Leu Leu Ile Leu Leu Arg Leu Trp Arg Val Ala  
200 205 210

Arg Ile Ile Asn Gly Ile Ile Ile Ser Val Lys Thr Arg Ser Glu  
215 220 225

Arg Gln Leu Leu Arg Leu Lys Gln Met Asn Val Gln Leu Ala Ala  
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Lys Ile Gln His Leu Glu Phe Ser Cys Ser Glu Lys Pro Leu Asp  
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<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<211> 469  
<212> PRT  
<213> Homo sapiens

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 Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met Thr Ile Asp  
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 Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val Glu Asn  
 140 145 150  
 Ile Pro Glu Ile Ile Tyr Trp Lys His Ser Thr Ile Phe Asp  
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 Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu  
 170 175 180  
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 Ala Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Leu  
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 Glu Ser Ala Ile Lys Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu  
 260 265 270  
 Val Gly Ser Asp Gln Glu Thr Leu Arg Ile His Glu Arg Leu Val  
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 Ala Gly Ser Leu Ala Gly Ala Ile Ala Gln Ser Ser Ile Tyr Pro  
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 Tyr Ser Gly Met Leu Asp Cys Ala Arg Arg Ile Leu Ala Arg Glu  
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 Gly Val Ala Ala Phe Tyr Lys Gly Tyr Val Pro Asn Met Leu Gly  
 335 340 345  
 Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val Tyr Glu Thr Leu  
 350 355 360  
 Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser Ala Asp Pro  
 365 370 375  
 Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser Thr Cys  
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 Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg Met  
 395 400 405

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
410 415 420  
Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu  
425 430 435  
Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val  
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<212> DNA  
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<212> PRT

<213> Homo sapiens

<400> 291

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Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
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Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
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Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
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Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala  
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Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
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Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

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Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val		
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Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys		
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<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

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	20					25					30			
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu
	35					40					45			
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro
		50						55			60			
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu
		65						70			75			
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu
		80						85			90			
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp
		95						100			105			
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln
		110						115			120			
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro
		125						130			135			
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro
		140						145			150			

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<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250

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gtcccctcaca tgccaaacacc agctgtatca gctcctcagc cagtcctct 400

ctagagacac cagtcagatt ataccagaat atgttctgtct cagcggagaa 450

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<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

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		20							25					30
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn
		35						40						45
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro
		50						55						60
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser
		65						70						75
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu
		80						85						90
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys
		95						100						105
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser
		110						115						120
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser
		125						130						135
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val
		140						145						150
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu
		155						160						165
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe
		170						175						180
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys
		185						190						195
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro
		200						205						210
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu
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<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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														30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
														45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
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Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

65

70

75

Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
	95							100						105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110				115						120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
			125					130						135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140				145						150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
			155					160						165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
			170					175						180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
			185					190						195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
			200					205						210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Gly	Lys		
			215					220						225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
			230					235						240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
			245					250						255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260				265						270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275				280						285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290				295						300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
			305					310						315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
			320					325						330
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&lt;210&gt; 298

&lt;211&gt; 2692

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 298

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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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									20				25	30
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
									35		40		45	
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
									50		55		60	
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
									65		70		75	

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                   80                      85                     90  
  
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro  
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 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met  
                   125                    130                    135  
  
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp  
                   140                    145                    150  
  
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu  
                   155                    160                    165  
  
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile  
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                   185                    190                    195  
  
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His  
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 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu  
                   260                    265                    270  
  
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala  
                   275                    280                    285  
  
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser  
                   290                    295                    300  
  
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 <212> DNA  
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cgagatcacg gcccacctcc tggcgctgcc cgagcatgat gcccgtgaga 1250  
aggtgctgca gacactgggc gtcctcctga ccacctgccc ggaccgctac 1300  
cgtcaggacc cccagctcg gaggacactg gccagcctgc aggctgagta 1350  
ccaggtgctg gccagcctgg agctgcagga tggtgaggac gagggtact 1400  
tccaggagct gctggctct gtcaacagct tgctgaagga gctgagatga 1450  
ggccccacac caggactgga ctgggatgcc gctagtgagg ctgaggggtg 1500  
ccagcgtggg tggcatttc aggcaggagg acatcttggc agtgcgtggct 1550  
tggccattaa atggaaacct gaaggccaaa aaaaaaaaaa aaaaaaaaaa 1600  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461  
<212> PRT  
<213> Homo sapiens

<400> 301  
Met Ala Pro Gln Ser Leu Pro Ser Ser Arg Met Ala Pro Leu Gly  
1 5 10 15  
Met Leu Leu Gly Leu Leu Met Ala Ala Cys Phe Thr Phe Cys Leu  
20 25 30  
Ser His Gln Asn Leu Lys Glu Phe Ala Leu Thr Asn Pro Glu Lys  
35 40 45  
Ser Ser Thr Lys Glu Thr Glu Arg Lys Glu Thr Lys Ala Glu Glu  
50 55 60  
Glu Leu Asp Ala Glu Val Leu Glu Val Phe His Pro Thr His Glu  
65 70 75  
Trp Gln Ala Leu Gln Pro Gly Gln Ala Val Pro Ala Gly Ser His  
80 85 90  
Val Arg Leu Asn Leu Gln Thr Gly Glu Arg Glu Ala Lys Leu Gln  
95 100 105  
Tyr Glu Asp Lys Phe Arg Asn Asn Leu Lys Gly Lys Arg Leu Asp  
110 115 120  
Ile Asn Thr Asn Thr Tyr Thr Ser Gln Asp Leu Lys Ser Ala Leu  
125 130 135  
Ala Lys Phe Lys Glu Gly Ala Glu Met Glu Ser Ser Lys Glu Asp  
140 145 150  
Lys Ala Arg Gln Ala Glu Val Lys Arg Leu Phe Arg Pro Ile Glu  
155 160 165  
Glu Leu Lys Lys Asp Phe Asp Glu Leu Asn Val Val Ile Glu Thr  
170 175 180  
Asp Met Gln Ile Met Val Arg Leu Ile Asn Lys Phe Asn Ser Ser  
185 190 195  
Ser Ser Ser Leu Glu Glu Lys Ile Ala Ala Leu Phe Asp Leu Glu  
200 205 210  
Tyr Tyr Val His Gln Met Asp Asn Ala Gln Asp Leu Leu Ser Phe  
215 220 225  
Gly Gly Leu Gln Val Val Ile Asn Gly Leu Asn Ser Thr Glu Pro  
230 235 240  
Leu Val Lys Glu Tyr Ala Ala Phe Val Leu Gly Ala Ala Phe Ser  
245 250 255  
Ser Asn Pro Lys Val Gln Val Glu Ala Ile Glu Gly Gly Ala Leu  
260 265 270  
Gln Lys Leu Leu Val Ile Leu Ala Thr Glu Gln Pro Leu Thr Ala  
275 280 285  
Lys Lys Lys Val Leu Phe Ala Leu Cys Ser Leu Leu Arg His Phe

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys Leu Gly Gly Leu Gln Val		
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg		
455	460	

<210> 302  
<211> 2136  
<212> DNA  
<213> Homo sapiens

<400> 302  
ttcggcttcc gtagaggaag tggcgccgac cttcatttgg ggtttcgggt 50  
cccccccttc ccctcccccg gggtctgggg gtgacattgc accgcgc(ccc 100  
tcgtgggtc gcgttgccac cccacgcgga ctccccagct ggccgc(ccc 150  
tcccatttgc ctgtccttgtt caggccccca ccccccattcc cacctgacca 200  
gccatgggg ctgcgggttt tttcggctgc actttcgtcg cgttcgcccc 250  
ggccttcg(cg) cttttcttga tcactgtggc tggggaccgg cttcgcgtta 300  
tcatccttgtt cgca(ggg)ca tttttcttgtt tggctccct gctcctggcc 350  
tctgtggctt ggttcatctt ggtccatgtg accgaccggc cagatgc(ccc 400  
gctccagtagc ggccttcgtga tttttgggtgc tgctgtctt gtccttctac 450  
aggaggtgtt ccgccttgcc tactacaagc tgcttaagaa ggcagatgaa 500  
gggttagcat cgctgagtga ggacggaaaga tcacccatct ccatccgc(cca 550

gatggcctat gtttctggtc tctccttcgg tatcatcagt ggtgtcttct 600  
ctgttatcaa tattttggct gatgcacttg ggccaggtgt ggttgggatc 650  
catggagact caccctatta cttcctgact tcagccttgc tgacagcagc 700  
cattatcctg ctccatacct tttggggagt tgtgttctt gatgcctgtg 750  
agaggagacg gtactggct ttgggcctgg tggttggag tcacctactg 800  
acatcgggac tgacattcct gaaccctgg tatgaggcca gcctgctgcc 850  
catctatgca gtcactgttt ccatggggct ctgggccttc atcacagctg 900  
gagggtccct ccgaagtatt cagcgcagcc tcttgttaa ggactgacta 950  
cctggactga tcgcctgaca gatcccaccc gcctgtccac tgcccatgac 1000  
tgagccccagc cccagccccgg gtccattgcc cacattctct gtctccttct 1050  
cgtcggtcta ccccaactacc tccagggttt tgctttgtcc ttttgtgacc 1100  
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcagtga 1150  
ctgggtgggtt tgaatctgca cttatccccca ccacctgggg acccccctgt 1200  
tgtgtccagg actccccctg tgtcagtgtc ctgctctcac cctgccccaaag 1250  
actcacctcc cttccctct gcaggccgac ggcaggagga cagtcgggtg 1300  
atggtgtatt ctgcctgca catcccaccc gaggactgag ggaacctagg 1350  
ggggaccctt gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400  
tccatctcca gttctggaca gtgcagggtt ccaagaaaag ggacctagtt 1450  
tagccattgc cctggagatg aaattaatgg aggctcaagg atagatgagc 1500  
tctgagtttc tcagttactcc ctcaagactg gacatcttgg tcttttctc 1550  
aggcctgagg gggaccatttttgggtgtga taaataccct aaactgcctt 1600  
tttttctttt ttgaggtggg gggaggaggagg aggtatattt gaaactcttct 1650  
aacctccttg ggctatatattt tctctcctcg agttgctcct catggctggg 1700  
ctcatttcgg tccctttctc cttggcctcca gaccttgggg gaaaggaagg 1750  
aagtgcattgt ttgggaactg gcattactgg aactaatggt tttaacctcc 1800  
ttaaccacca gcatccctcc tctcccccaag gtgaagtggaa gggtgctgtg 1850  
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900  
atgacatcgt agggaaaggag gggagatttttttttagttt ttaattgggg 1950  
tgtgggaggg gcggggaggt tttctataaa ctgtatcatt ttctgctgag 2000  
ggtgagtggt cccatcctttaatcaaggt gattgtgatt ttgactaata 2050  
aaaaagaatt tgaaaaaaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100  
aaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 2136

<210> 303  
<211> 247  
<212> PRT  
<213> Homo sapiens

<400> 303  
Met Gly Ala Ala Val Phe Phe Gly Cys Thr Phe Val Ala Phe Gly  
1 5 10 15  
Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu  
20 25 30  
Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser  
35 40 45  
Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr  
50 55 60  
Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly  
65 70 75  
Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr  
80 85 90  
Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser  
95 100 105  
Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val  
110 115 120  
Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile  
125 130 135  
Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His  
140 145 150  
Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala  
155 160 165  
Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp  
170 175 180  
Ala Cys Glu Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly  
185 190 195  
Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr  
200 205 210  
Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly  
215 220 225  
Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln  
230 235 240  
Arg Ser Leu Leu Cys Lys Asp  
245

<210> 304  
<211> 240  
<212> DNA  
<213> Homo sapiens

<220>

<221> unsure  
<222> 108, 123, 126, 154, 198, 206, 217  
<223> unknown base

<400> 304  
aagctggttt aaggaagcag aggagggtta gattcggtga gtgaggacgg 50  
aagatcaacc catttcattt ccgcagatg gcctatgtt ctggctctc 100  
ccttcggnat catcagtggt gtnttntctg ttatcaatat tttggctgat 150  
gcanttggc caggtgtggt tggatccat ggagactcac cctattattt 200  
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305  
<211> 378  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
<223> unknown base

<400> 305  
gaccgaccgt tcagatgccccc ggttccagta cggcttcctg atttttggtg 50  
ctgctgtntc tgtccttcta caggagggtgt tccgcttgc ctantacaag 100  
ctgcttaaga aggcatgaa ggggttagca tngctgagtg aggacggaag 150  
atcacccatt tccatccgccc agatggccata tgtttntgggt ntcccttcg 200  
gtatcatcag tggtgttttn tctgttatca atatttgggn tcatgcantt 250  
gggccaggtg tggtgtggat ccatggagan tcaccctatt aattcctgaa 300  
ttcagccttt ntgacagcag ccattatcct gntccataacc ttttggggag 350  
ttgtgttttt tcatgcctgt gagaggag 378

<210> 306  
<211> 655  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1, 22, 129, 133, 184  
<223> unknown base

<400> 306  
ngttggagaa gtggcgccga ctttcatttgg gggtttcgggt ttccccccctt 50  
tccctttccc cggggctctgg ggtgacatttgc cacggggcccc tcgtggggtc 100  
gctttggccac cccacgcggaa ctccccagnt ggngcgccct tcccatattgc 150  
ctgtcctgggtt caggccccca ccccccatttcc cacntgacca gccatgggggg 200  
ctgcgggtttt tttcggttcg acatttcgtcg cgttcgccccc ggccttcg 250

cttttcttga tcactgtggc tggggacccg cttcgcgta tcatccttgt 300  
cgcaggggca ttttctggc tggtctccct gctctggcc tctgtggct 350  
gttcatctt ggtccatgtg accgaccggc cagatgcccg gctccagttac 400  
ggcctcctga ttttggtgc tgctgtctc gtccttctac aggagggttt 450  
ccgcttgcc tactacaagc tgcttaagaa ggcagatgag gggtagcat 500  
cgctgagtga ggacggaaga tcacccatct ccatccgcca gatggcctat 550  
gtttctggtc ttccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600  
tattttggct gatgcacttg ggccaggtgt ggttgggatc catggagact 650  
caccc 655

<210> 307  
<211> 650  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 52, 89, 128  
<223> unknown base

<400> 307  
gtaaaagaaa gtggccggac cttcattggg gtttcggttc ccccccttcc 50  
cnttccccgg ggtctggggg tgacattgca ccgcgcccnc cgtggggtcg 100  
cggtgccacc ccacgcggac tccccagntg gcgcgcccct cccatttgc 150  
tgtcctggtc aggccccac ccccccttcc acctgaccag ccatgggggc 200  
tgcgggttt ttccggctgc actttcgctcg cggtcgggcc cggccttcgc 250  
gctttcttg atcactgtgg ctggggaccc gtttcgcgtt atcatcctgg 300  
tcgcaggggc attttctgg ctggcttccc tgctcctggc ctctgtggtc 350  
tggttcatct tggtccatgt gaccgaccgg tcagatgccg ggctccagta 400  
cggccttcgt attttgggtg ctgtgtctc tgtccttcta caggagggtgt 450  
tccgctttgc ctactacaag ctgcttaaga aggagatga ggggttagca 500  
tcgctgagtgc aggacggaag atcacccatc tccatccgccc agatggccta 550  
tgtttctggc ctctccttcg gatatcatcag tggtgtcttc tctgttatca 600  
atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308  
<211> 1570  
<212> DNA  
<213> Homo sapiens

<400> 308  
gccccagggc gcagtgggtg gttataactc agggccgggtg cccagagccc 50

aggaggagggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100  
gctgggagca aatccccac cccctacctg gggacaggg caagtgagac 150  
ctggtgaggg tggctcagca ggcagggaaag gagaggtgtc tgtgcgtcct 200  
gcacccacat ctttctctgt cccctccttg ccctgtctgg aggctgctag 250  
actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccat 300  
ggtggcccgta ctttgtggtt cctctctacc tggggaaata aggtgcagcg 350  
gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400  
cacagccttg cttctgggg tcacagagca tgttctcgcc aacaatgatg 450  
tttcctgtga ccacccctct aacaccgtgc cctctggag caaccaggac 500  
ctgggagctg gggccgggaa agacgcccgg tcggatgaca gcagcagccg 550  
catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600  
cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650  
ccacagtggc tgctcacggc cgcccactgc aggaagaaaat 700  
ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750  
tgttccaggg ggtcaaatcc atccccacc ctggctactc ccaccctggc 800  
caactctaactg acctcatgct catcaaactg aacagaagaa ttctcccac 850  
taaagatgtc agacccatca acgtctcctc tcattgtccc tctgctggaa 900  
caaagtgcctt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950  
ttccctaagg tcctccagtg cttgaatatac agcgtgctaa gtcagaaaaag 1000  
gtgcgaggat gcttacccga gacagataga tgacaccatg ttctgcggccg 1050  
gtgacaaagc aggttagagac tcctgcccagg gtgattctgg ggggcctgtg 1100  
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tgcccgcccc aacagaccgg gtgtctacac gaacctctgc aagttcacca 1200  
agtggatcca gaaaaaccatc caggccaact cctgagtcat cccaggactc 1250  
agcacaccgg catccccacc tgctgcaggg acagccctga cactccttc 1300  
agaccctcat tccttcccag agatgttgag aatgttcatc tctccagccc 1350  
ctgaccccat gtctcctgga ctcagggtct gcttcccccac cattgggtcg 1400  
accgtgtctc tctagttgaa ccctggaaac aatttccaaa actgtccagg 1450  
gcgggggttg cgtctcaatc tccctggggc actttcatcc tcaagctcag 1500  
ggcccatccc ttctctgcag ctctgaccca aatttagtcc cagaataaaa 1550  
ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293  
<212> PRT  
<213> Homo sapiens

<400> 309  
Met Ala Thr Ala Arg Pro Pro Trp Met Trp Val Leu Cys Ala Leu  
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Ile Thr Ala Leu Leu Leu Gly Val Thr Glu His Val Leu Ala Asn  
20 25 30  
Asn Asp Val Ser Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly  
35 40 45  
Ser Asn Gln Asp Leu Gly Ala Gly Ala Glu Asp Ala Arg Ser  
50 55 60  
Asp Asp Ser Ser Ser Arg Ile Ile Asn Gly Ser Asp Cys Asp Met  
65 70 75  
His Thr Gln Pro Trp Gln Ala Ala Leu Leu Leu Arg Pro Asn Gln  
80 85 90  
Leu Tyr Cys Gly Ala Val Leu Val His Pro Gln Trp Leu Leu Thr  
95 100 105  
Ala Ala His Cys Arg Lys Lys Val Phe Arg Val Arg Leu Gly His  
110 115 120  
Tyr Ser Leu Ser Pro Val Tyr Glu Ser Gly Gln Gln Met Phe Gln  
125 130 135  
Gly Val Lys Ser Ile Pro His Pro Gly Tyr Ser His Pro Gly His  
140 145 150  
Ser Asn Asp Leu Met Leu Ile Lys Leu Asn Arg Arg Ile Arg Pro  
155 160 165  
Thr Lys Asp Val Arg Pro Ile Asn Val Ser Ser His Cys Pro Ser  
170 175 180  
Ala Gly Thr Lys Cys Leu Val Ser Gly Trp Gly Thr Thr Lys Ser  
185 190 195  
Pro Gln Val His Phe Pro Lys Val Leu Gln Cys Leu Asn Ile Ser  
200 205 210  
Val Leu Ser Gln Lys Arg Cys Glu Asp Ala Tyr Pro Arg Gln Ile  
215 220 225  
Asp Asp Thr Met Phe Cys Ala Gly Asp Lys Ala Gly Arg Asp Ser  
230 235 240  
Cys Gln Gly Asp Ser Gly Gly Pro Val Val Cys Asn Gly Ser Leu  
245 250 255  
Gln Gly Leu Val Ser Trp Gly Asp Tyr Pro Cys Ala Arg Pro Asn  
260 265 270  
Arg Pro Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Lys Trp Ile  
275 280 285  
Gln Glu Thr Ile Gln Ala Asn Ser

<210> 310  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 310  
tcctgtgacc acccctctaa cacc 24  
  
<210> 311  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 311  
ctggaacatc tgctgccag attc 24  
  
<210> 312  
<211> 50  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 312  
gtcgatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50  
  
<210> 313  
<211> 3010  
<212> DNA  
<213> Homo sapiens  
  
<400> 313  
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ccggccgcgc gacaagccgc agcgcccgag ctgcggctac gtgtgtgca 100  
ccgtgctgct ggccctggct gtgctgctgg ctgttagctgt caccggtgcc 150  
gtgctcttcc tgaaccacgc ccacgcgcg ggcacggcgc cccccacctgt 200  
cgtcagcact gggctgcca gcgcacacag cgcctggc actgtggaaa 250  
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ctcacccgaca gcttcgcacg cctggagagc gcccaggccct cggtgctgca 350  
ggcgctgaca gagcaccagg cccagccacg gctgggtggc gaccaggagc 400  
aggagctgt ggacacgctg gccgaccacg tgccccggct gctggcccg 450  
gcctcagacgc tgcagacgga gtgcattggg ctgcggaaagg ggcattggcac 500  
gctggccacag ggcctcagcg ccctgcacag tgagcaggcc cgcctcatcc 550

agcttctctc tgagagccag ggccacatgg ctcacctggta gaactccgtc 600  
agcgacatcc tggatgcct gcagaggac cggggctgg gcccggcccg 650  
caacaaggcc gacttcaga gagcgctgc cggggaaacc cggccccggg 700  
gctgtgccac tggctccgg ccccggact gtctggacgt ctcctaagc 750  
ggacagcagg acgatggcgt ctactctgtc tttcccaccc actacccggc 800  
cggtttccag gtgtactgtg acatgcgac ggacggcggc ggctggacgg 850  
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gcgtaccgag acggctttgg caggctcacc ggggagcaact ggctaggc 950  
caagaggatc cacccctga ccacacaggc tgcctacgag ctgcacgtgg 1000  
acctggagga ctgtgagaat ggcacggcct atgcccgtta cgggagcttc 1050  
ggcgtggcgt tggttccgt ggaccctgag gaagacgggt acccgctcac 1100  
cgtggctgac tattccggca ctgcaggcga ctccctcctg aagcacagcg 1150  
gcatgaggtt caccaccaag gaccgtgaca gcgaccatc agagaacaac 1200  
tgtgcccgcct tctaccgcgg tgcctgggtt accgcaact gccacacgtc 1250  
caacctaataat gggcagtacc tgcgcgggtgc gcacgcctcc tatgccgacg 1300  
gcgtggagtg gtcctccgtt accggctggc agtactcaact caagttctct 1350  
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tccttggccc tgctggtccc tgtcgccccca tcccccaccc cacctcactc 1450  
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agggaggggc cgggcatcc ctgacacgaa gctccctgg cgggtgaagt 1550  
cacacatcgc cttctcgccg tccccacccc ctcoatttgg cagctcaactg 1600  
atctcttgcct tctgctgatg ggggctggca aacttgcga ccccaactcc 1650  
tgccctggccc cactgtgact cgggtgctgt ttgcctggccc ctggccagga 1700  
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cattatgggg acagagagca gggggcagac agcacccctg gagtcctcct 1800  
agcagatcgt gggaaatgtc aggtctctt gaggtcaggt ctgaggccag 1850  
tatcctccag ccctcccaat gccaacccccc accccgttcc cctgggtggcc 1900  
agagaaccca cctctccccc aaggccctca gcctggctgt gggctgggtg 1950  
gccccatcct accaggccct gaggtcagga tggggagctg ctgcctttgg 2000  
ggaccccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050  
tgccccggca ggctgggtt ctgcagtccct cttacctgtt gtgcccaccc 2100  
gctctctgtc tcaaatttggg cccaaacccat ccccccacccaa gctcccgcc 2150

gtcctcctac ctggggcagc cggggctgcc atccatttc tcctgcctct 2200  
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gctcttggtt ttctggctg gggccttaggc agggctggga tgaggcttgt 2300  
acaaccccca ccaccaattt cccagggact ccagggctt gaggcctccc 2350  
aggagggcct tgggggtgat gacccttcc ctgaggtggc tgtctccatg 2400  
aggaggccaa cccttgccat tgaccgtggc cacctggacc caggccaggc 2450  
ccggcccgcc gagtggtcaa gggacagggc ccacccatc gggcaaatgg 2500  
ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550  
ttgaatccctc ccaacaccca gcacgctgtc atccccactc cttgtgtgca 2600  
cacatgcaga ggtgagaccc gcaggctccc aggaccagca gccacaagg 2650  
cagggctgga gccgggtcct cagctgtctg ctcagcagcc ctggaccgc 2700  
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caggtgccta ggggtgtgg ggttccgttc tccctcccc tcccactgaa 2900  
gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggtttgt 2950  
gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggtcatcc 3000  
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<210> 314

<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

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Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
						20			25				30	

Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
							35			40			45	

Ala	Val	Thr	Gly	Ala	Val	Leu	Phe	Leu	Asn	His	Ala	His	Ala	Pro
					50				55			60		

Gly	Thr	Ala	Pro	Pro	Pro	Val	Val	Ser	Thr	Gly	Ala	Ala	Ser	Ala
						65			70			75		

Asn	Ser	Ala	Leu	Val	Thr	Val	Glu	Arg	Ala	Asp	Ser	Ser	His	Leu
						80			85			90		

Ser	Ile	Leu	Ile	Asp	Pro	Arg	Cys	Pro	Asp	Leu	Thr	Asp	Ser	Phe
							95			100		105		

Ala Arg Leu Glu Ser Ala Gln Ala Ser Val Leu Gln Ala Leu Thr  
 110 115 120  
 Glu His Gln Ala Gln Pro Arg Leu Val Gly Asp Gln Glu Gln Glu  
 125 130 135  
 Leu Leu Asp Thr Leu Ala Asp Gln Leu Pro Arg Leu Leu Ala Arg  
 140 145 150  
 Ala Ser Glu Leu Gln Thr Glu Cys Met Gly Leu Arg Lys Gly His  
 155 160 165  
 Gly Thr Leu Gly Gln Gly Leu Ser Ala Leu Gln Ser Glu Gln Gly  
 170 175 180  
 Arg Leu Ile Gln Leu Leu Ser Glu Ser Gln Gly His Met Ala His  
 185 190 195  
 Leu Val Asn Ser Val Ser Asp Ile Leu Asp Ala Leu Gln Arg Asp  
 200 205 210  
 Arg Gly Leu Gly Arg Pro Arg Asn Lys Ala Asp Leu Gln Arg Ala  
 215 220 225  
 Pro Ala Arg Gly Thr Arg Pro Arg Gly Cys Ala Thr Gly Ser Arg  
 230 235 240  
 Pro Arg Asp Cys Leu Asp Val Leu Leu Ser Gly Gln Gln Asp Asp  
 245 250 255  
 Gly Val Tyr Ser Val Phe Pro Thr His Tyr Pro Ala Gly Phe Gln  
 260 265 270  
 Val Tyr Cys Asp Met Arg Thr Asp Gly Gly Gly Trp Thr Val Phe  
 275 280 285  
 Gln Arg Arg Glu Asp Gly Ser Val Asn Phe Phe Arg Gly Trp Asp  
 290 295 300  
 Ala Tyr Arg Asp Gly Phe Gly Arg Leu Thr Gly Glu His Trp Leu  
 305 310 315  
 Gly Leu Lys Arg Ile His Ala Leu Thr Thr Gln Ala Ala Tyr Glu  
 320 325 330  
 Leu His Val Asp Leu Glu Asp Phe Glu Asn Gly Thr Ala Tyr Ala  
 335 340 345  
 Arg Tyr Gly Ser Phe Gly Val Gly Leu Phe Ser Val Asp Pro Glu  
 350 355 360  
 Glu Asp Gly Tyr Pro Leu Thr Val Ala Asp Tyr Ser Gly Thr Ala  
 365 370 375  
 Gly Asp Ser Leu Leu Lys His Ser Gly Met Arg Phe Thr Thr Lys  
 380 385 390  
 Asp Arg Asp Ser Asp His Ser Glu Asn Asn Cys Ala Ala Phe Tyr  
 395 400 405  
 Arg Gly Ala Trp Trp Tyr Arg Asn Cys His Thr Ser Asn Leu Asn  
 410 415 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val  
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser  
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg  
455 460

<210> 315  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 315  
cacacgtcca acctcaatgg gcag 24

<210> 316  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 316  
gaccagcagg gccaaggaca agg 23

<210> 317  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 317  
gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318  
<211> 1841  
<212> DNA  
<213> Homo sapiens

<400> 318  
gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50  
cttttagtgc cttgcttcct gaactagctc acagtagccc ggcggccag 100  
ggcaatccga ccacattca ctctcaccgc tgttaggaatc cagatgcagg 150  
ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200  
atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250  
gcmcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300  
ccctgctgac ttttgcttg gtgctgctga tagggctggc agccctgggg 350  
cttttgtttt ttcaagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaata  
ttcaagtcca  
aaactctgtc  
ttgtacagaa  
aagacagcaa  
tctaccatgc  
tcagagctac  
ctgacagtgg  
gaactgttcc  
tgtggccatc  
agcggtgt  
catgtcccc  
ctacaaata  
acattggaa  
aaaatgggtt  
gggttatgc  
caaccaacct  
aacttttagc  
atgtcttc  
tacattgagg  
ttggcagtc  
tgtttgttc  
catctgcct  
aatctcaa  
ctctgataat  
atccccatct  
gagagattaa  
agtttcagtt  
actgaagatt  
<210> 319  
<211> 280  
<212> PRT  
<213> Homo sapiens

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caatggaaat  
aagttggag  
tgaagataaa  
tctactctta  
caaggcctgg  
atattataat  
ctcaatggga  
tgatcttctc  
aaaggactgc  
ctgtgagaga  
ctgaaacatt  
cagagtgagc  
atggaacata  
ctcggttcc  
ctgtgagaga  
aggcgaaggt  
cagactgacc  
tgatgtcacc  
aaacaagaa  
gacctggaat  
ttggacaggg  
atggAACCC  
gcacccaaag  
tgatgtcacc  
aaaggactgc  
tggtgaagcc  
ctgtggatgg  
actgttctc  
ccctctgcaa  
caaagcaagg  
gactgattcg  
atcaggaaag  
actatcttc  
tgactagtac  
tcaccagcat  
gcttagagat  
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1841

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 35 40 45  
 Thr Trp Arg Pro Val Ala Leu Thr Leu Leu Thr Leu Cys Leu Val  
 50 55 60  
 Leu Leu Ile Gly Leu Ala Ala Leu Gly Leu Leu Phe Phe Gln Tyr  
 65 70 75  
 Tyr Gln Leu Ser Asn Thr Gly Gln Asp Thr Ile Ser Gln Met Glu  
 80 85 90  
 Glu Arg Leu Gly Asn Thr Ser Gln Glu Leu Gln Ser Leu Gln Val  
 95 100 105  
 Gln Asn Ile Lys Leu Ala Gly Ser Leu Gln His Val Ala Glu Lys  
 110 115 120  
 Leu Cys Arg Glu Leu Tyr Asn Lys Ala Gly Ala His Arg Cys Ser  
 125 130 135  
 Pro Cys Thr Glu Gln Trp Lys Trp His Gly Asp Asn Cys Tyr Gln  
 140 145 150  
 Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp Cys Lys Tyr Phe Cys  
 155 160 165  
 Leu Ser Glu Asn Ser Thr Met Leu Lys Ile Asn Lys Gln Glu Asp  
 170 175 180  
 Leu Glu Phe Ala Ala Ser Gln Ser Tyr Ser Glu Phe Phe Tyr Ser  
 185 190 195  
 Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu  
 200 205 210  
 Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile  
 215 220 225  
 Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu  
 230 235 240  
 Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys  
 245 250 255  
 Val Cys Glu Arg Arg Ala Gly Met Val Lys Pro Glu Ser Leu His  
 260 265 270  
 Val Pro Pro Glu Thr Leu Gly Glu Gly Asp  
 275 280

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>  
<221> unsure  
<222> 59, 95, 149, 331, 364, 438, 446  
<223> unknown base

<400> 320  
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gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100  
cttttgcac aattcggcat ccagagcccc ggccgcacaga gcacaggnt 150  
ccttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200  
ggtgctgctg atagggctgg cagccctggg gctttgttt tttcagtact 250  
accagctctc caatactggt caagacacca tttctcaa at ggaagaaaaga 300  
ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaatataaa 350  
gcttgcagga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400  
ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450  
atacacacac cacttccc 468

<210> 321  
<211> 23  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 321  
atgcaggcca agtacagcag cac 23

<210> 322  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 322  
catgctgacg acttcctgca agc 23

<210> 323  
<211> 23  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 323  
ccacacagtc tctgcttctt ggg 23

<210> 324  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 324  
atgctggatg atgatgggaa caccaccatg agcctgcatt 40  
  
<210> 325  
<211> 2988  
<212> DNA  
<213> Homo sapiens  
  
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gagggagcgg gccccccgc ggggcccggag ccctccggat ccgccccctc 150  
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gatccagaat accagccatc tggccgttga tggggaccgg gcagctgct 1350  
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ctgcgctggg actacttcac ggagcagoac gctttctcct gcgccgatgg 1450  
ctcaccccgcc tgcccactgc gtggggctga ccgggctgat gtggccgatg 1500  
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gctccctgcc tttaataaac tggccaagtg tgaaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met Arg Ala Ser Leu Leu Leu Ser Val Ieu Arg Pro Ala Gly Pro  
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Val Ala Val Gly Ile Ser Leu Gly Phe Thr Leu Ser Leu Leu Ser  
20 25 30

Val Thr Trp Val Glu Glu Pro Cys Gly Pro Gly Pro Pro Gln Pro  
35 40 45

Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg  
50 55 60

Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly  
65 70 75

Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro  
80 85 90

Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg  
95 100 105

Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu  
110 115 120

Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val  
125 130 135

Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe  
140 145 150

Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Pro Gly Met Ala Val  
155 160 165

Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala  
170 175 180

Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe  
185 190 195

Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala  
200 205 210

Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr  
215 220 225

Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly  
230 235 240

Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu  
245 250 255

Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile  
260 265 270

Val Ser Ala Arg Pro Asp Glu Trp Leu Gly Arg Cys Ile Leu Asp  
 275 280 285  
 Ala Thr Gly Val Gly Cys Thr Gly Asp His Glu Gly Val His Tyr  
 290 295 300  
 Ser His Leu Glu Leu Ser Pro Gly Glu Pro Val Gln Glu Gly Asp  
 305 310 315  
 Pro His Phe Arg Ser Ala Leu Thr Ala His Pro Val Arg Asp Pro  
 320 325 330  
 Val His Met Tyr Gln Leu His Lys Ala Phe Ala Arg Ala Glu Leu  
 335 340 345  
 Glu Arg Thr Tyr Gln Glu Ile Gln Glu Leu Gln Trp Glu Ile Gln  
 350 355 360  
 Asn Thr Ser His Leu Ala Val Asp Gly Asp Arg Ala Ala Ala Trp  
 365 370 375  
 Pro Val Gly Ile Pro Ala Pro Ser Arg Pro Ala Ser Arg Phe Glu  
 380 385 390  
 Val Leu Arg Trp Asp Tyr Phe Thr Glu Gln His Ala Phe Ser Cys  
 395 400 405  
 Ala Asp Gly Ser Pro Arg Cys Pro Leu Arg Gly Ala Asp Arg Ala  
 410 415 420  
 Asp Val Ala Asp Val Leu Gly Thr Ala Leu Glu Glu Leu Asn Arg  
 425 430 435  
 Arg Tyr His Pro Ala Leu Arg Leu Gln Lys Gln Gln Leu Val Asn  
 440 445 450  
 Gly Tyr Arg Arg Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu  
 455 460 465  
 Asp Leu Gln Leu Glu Ala Leu Thr Pro Gln Gly Gly Arg Arg Pro  
 470 475 480  
 Leu Thr Arg Arg Val Gln Leu Leu Arg Pro Leu Ser Arg Val Glu  
 485 490 495  
 Ile Leu Pro Val Pro Tyr Val Thr Glu Ala Ser Arg Leu Thr Val  
 500 505 510  
 Leu Leu Pro Leu Ala Ala Ala Glu Arg Asp Leu Ala Pro Gly Phe  
 515 520 525  
 Leu Glu Ala Phe Ala Thr Ala Ala Leu Glu Pro Gly Asp Ala Ala  
 530 535 540  
 Ala Ala Leu Thr Leu Leu Leu Tyr Glu Pro Arg Gln Ala Gln  
 545 550 555  
 Arg Val Ala His Ala Asp Val Phe Ala Pro Val Lys Ala His Val  
 560 565 570  
 Ala Glu Leu Glu Arg Arg Phe Pro Gly Ala Arg Val Pro Trp Leu  
 575 580 585

Ser Val Gln Thr Ala Ala Pro Ser Pro Leu Arg Leu Met Asp Leu  
590 595 600

Leu Ser Lys Lys His Pro Leu Asp Thr Leu Phe Leu Leu Ala Gly  
605 610 615

Pro Asp Thr Val Leu Thr Pro Asp Phe Leu Asn Arg Cys Arg Met  
620 625 630

His Ala Ile Ser Gly Trp Gln Ala Phe Phe Pro Met His Phe Gln  
635 640 645

Ala Phe His Pro Gly Val Ala Pro Pro Gln Gly Pro Gly Pro Pro  
650 655 660

Glu Leu Gly Arg Asp Thr Gly Arg Phe Asp Arg Gln Ala Ala Ser  
665 670 675

Glu Ala Cys Phe Tyr Asn Ser Asp Tyr Val Ala Ala Arg Gly Arg  
680 685 690

Leu Ala Ala Ala Ser Glu Gln Glu Glu Glu Leu Leu Glu Ser Leu  
695 700 705

Asp Val Tyr Glu Leu Phe Leu His Phe Ser Ser Leu His Val Leu  
710 715 720

Arg Ala Val Glu Pro Ala Leu Leu Gln Arg Tyr Arg Ala Gln Thr  
725 730 735

Cys Ser Ala Arg Leu Ser Glu Asp Leu Tyr His Arg Cys Leu Gln  
740 745 750

Ser Val Leu Glu Gly Leu Gly Ser Arg Thr Gln Leu Ala Met Leu  
755 760 765

Leu Phe Glu Gln Glu Gln Gly Asn Ser Thr  
770 775

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 329  
atggctcagt gtgcagacag 20

<210> 330  
<211> 24  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 330  
gcatgctgct ccgtgaagta gtcc 24

<210> 331  
<211> 24  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 331  
atgcattggaa aagaaggcct gcccc 24

<210> 332  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 332  
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<210> 333  
<211> 1095  
<212> DNA  
<213> Homo sapiens

<400> 333  
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gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggccc 150  
gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaaagctc 200  
tgcctcttcc cccagtgggc gagggaaactc gggcgattt gctgggaact 250  
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300  
ccatcaataa gaaatttctc agcctggccg aaaatggttt gccccacgaa 350  
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcatgg 400

aaaacccaaat cagatctggg acctatatag cgtggcggag gcggggcgat 450  
gattgtcgcg ctgcgaccca ctgcagctgc gcacagtgcg atttcttcc 500  
ccgccccctga gaccctgcag caccatctgt catggcggct gggctgttg 550  
gtttgagcgc tcgcccgtctt ttggcggcag cggcgcacgcg agggctcccg 600  
gccgcccccg tccgctggga atctagcttc tccaggactg tggtcgcccc 650  
gtccgctgtg gcgggaaagc ggcccccaga accgaccaca ccgtggcaag 700  
aggacccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750  
catggttatg acaaggaccc cgtnnngac gtctggaaaca tgctgacttgt 800  
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cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900  
aggcttgtga aataccgaga ggccaatggc cttccatca tggaatccaa 950  
ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagg 1000  
ctaagtgggg ctcaagaagc accgccttcc ccacccctg cctgccattc 1050  
tgacctcttc tcagagcacc taattaaagg ggctgaaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5				10				15		
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20			25						30		
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35			40						45		
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
			50				55					60		
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
			65				70					75		
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
			80				85					90		
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
			95					100				105		
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
			110					115				120		
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
			125				130					135		
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
			140				145					150		

Glu Asp Glu

<210> 335  
<211> 442  
<212> DNA  
<213> Homo sapiens  
  
<400> 335  
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gaccacaccc tggcaagagg acccagaacc cgaggacgaa aacttgtatg 200  
agaagaaccc agactcccat ggttatgaca aggacccgt tttggacgtc 250  
tggAACATGC gacttgtctt cttctttggc gtctccatca tcctggcct 300  
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350  
cccggcgca agctgagagg cttgtgaaat accgagaggc caatggcctt 400  
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442  
  
<210> 336  
<211> 23  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 336  
ctgagacct gcagcaccaat ctg 23  
  
<210> 337  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
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<223> Synthetic oligonucleotide probe  
  
<400> 337  
ggtgcttcggtt gagccccact tagc 24  
  
<210> 338  
<211> 40  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 338  
aatcttagctt ctccaggact gtggtcgcccc cgtccgctgt 40  
  
<210> 339  
<211> 2162  
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggcta tgccgcttc tctgctcgcc ctgttgctcc tggggcccg 50  
cggctggtgc cttgcagaac ccccacgoga cagcctgcgg gaggaacttg 100  
tcatcacccc gctgccttc ggggacgtag ccgccacatt ccagttccgc 150  
acgcgctggg attcggagct tcagcggaa ggagtgtccc attacaggct 200  
ctttccccaaa gccctgggc agctgatotc caagtattct ctacgggagc 250  
tgcacctgtc attcacacaa ggctttgga ggacccgata ctgggggcca 300  
cccttcctgc aggccccatc aggtgcagag ctgtgggtct ggttccaaga 350  
cactgtcact gatgtggata aatcttgaa ggagctcagt aatgtcctct 400  
cagggatctt ctgcgcctct ctaacttca tcgactccac caacacagtc 450  
actcccactg ctccttcaa acccctgggt ctggccaatg acactgacca 500  
ctactttctg cgctatgctg tgctgcccgc ggaggtggtc tgcaccgaaa 550  
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tctgtgtgc tgaaggcaga tcgcttgttc cacaccagct accactccca 650  
ggcagtgcatttccctg ttgcagaaaa tgcacgctgt actagcatct 700  
cctggagact gaggcagacc ctgtcagttt tatttgcattc cttcatcactg 750  
gggcaggaa agaaagactg gtccctttc cggatgttct cccgaaccct 800  
cacggagccc tgccccctgg cttagagag ccgagtctat gtggacatca 850  
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900  
actacatatac aggacgtcat cctaggcact cgaaagaccc atgccatcta 950  
tgacttgctt gacaccgcca tgcataacaa ctctcgaaac ctcaacatcc 1000  
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gagcacactg ctgtacaaca cccacccata ccgggccttc ccgggtgtgc 1150  
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tgcccaggac cggctgcaac cccacccctt ggagatgtgc attcagctgc 1300  
cggccaaactc agtcaccaag gttccatcc agtttgcgc ggcgtgtgc 1350  
aagtggaccc agtacacgccc agatcctaact catggcttct atgtcagccc 1400  
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actggaaaga gagtccccctc ttcaacagcc tggccatgtgc 1500

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550  
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tggtggccgt gtgctacggc tccttctaca atctcctcac ccgaacctc 1650  
cacatcgagg agccccgac aggtggcctg gccaagcggc tggccaacct 1700  
tatccggcgc gcccggagg tgccgtttct ctctggggag gggagccaa gggctgttcc 1750  
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aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900  
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgttagt 1950  
ggccacctct atattgaggt gctcaataag caaaagtggc cggtggctgc 2000  
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050  
ggcagcactg gccaagggtga tgggtgtgc tacacagtgt atgtcactgt 2100  
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150  
aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly
1						5			10				15

Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	Leu
				20					25					30

Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln
						35				40				45

Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	Ser
				50					55					60

His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys
						65				70				75

Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp
					80				85					90

Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	Gly
				95					100					105

Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	Asp
							110			115				120

Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	Cys
							125			130				135

Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	Thr
						140				145				150

Ala Ser Phe Lys Pro Leu Gly Leu Ala Asn Asp Thr Asp His Tyr  
 155 160 165  
 Phe Leu Arg Tyr Ala Val Leu Pro Arg Glu Val Val Cys Thr Glu  
 170 175 180  
 Asn Leu Thr Pro Trp Lys Lys Leu Leu Pro Cys Ser Ser Lys Ala  
 185 190 195  
 Gly Leu Ser Val Leu Leu Lys Ala Asp Arg Leu Phe His Thr Ser  
 200 205 210  
 Tyr His Ser Gln Ala Val His Ile Arg Pro Val Cys Arg Asn Ala  
 215 220 225  
 Arg Cys Thr Ser Ile Ser Trp Glu Leu Arg Gln Thr Leu Ser Val  
 230 235 240  
 Val Phe Asp Ala Phe Ile Thr Gly Gln Gly Lys Lys Asp Trp Ser  
 245 250 255  
 Leu Phe Arg Met Phe Ser Arg Thr Leu Thr Glu Pro Cys Pro Leu  
 260 265 270  
 Ala Ser Glu Ser Arg Val Tyr Val Asp Ile Thr Thr Tyr Asn Gln  
 275 280 285  
 Asp Asn Glu Thr Leu Glu Val His Pro Pro Pro Thr Thr Thr Tyr  
 290 295 300  
 Gln Asp Val Ile Leu Gly Thr Arg Lys Thr Tyr Ala Ile Tyr Asp  
 305 310 315  
 Leu Leu Asp Thr Ala Met Ile Asn Asn Ser Arg Asn Leu Asn Ile  
 320 325 330  
 Gln Leu Lys Trp Lys Arg Pro Pro Glu Asn Glu Ala Pro Pro Val  
 335 340 345  
 Pro Phe Leu His Ala Gln Arg Tyr Val Ser Gly Tyr Gly Leu Gln  
 350 355 360  
 Lys Gly Glu Leu Ser Thr Leu Leu Tyr Asn Thr His Pro Tyr Arg  
 365 370 375  
 Ala Phe Pro Val Leu Leu Leu Asp Thr Val Pro Trp Tyr Leu Arg  
 380 385 390  
 Leu Tyr Val His Thr Leu Thr Ile Thr Ser Lys Gly Lys Glu Asn  
 395 400 405  
 Lys Pro Ser Tyr Ile His Tyr Gln Pro Ala Gln Asp Arg Leu Gln  
 410 415 420  
 Pro His Leu Leu Glu Met Leu Ile Gln Leu Pro Ala Asn Ser Val  
 425 430 435  
 Thr Lys Val Ser Ile Gln Phe Glu Arg Ala Leu Leu Lys Trp Thr  
 440 445 450  
 Glu Tyr Thr Pro Asp Pro Asn His Gly Phe Tyr Val Ser Pro Ser  
 455 460 465

Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val  
470 475 480

Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser  
485 490 495

Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu  
500 505 510

Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile  
515 520 525

Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr  
530 535 540

Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly  
545 550 555

Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly  
560 565 570

Val Pro Pro Leu

<210> 341

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 341

tggacaccgt accctggat ctgc 24

<210> 342

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<221> Artificial Sequence

<222> 1-24

<223> Synthetic oligonucleotide probe

<400> 342

ccaactctga ggagagcaag tggc 24

<210> 343

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 343

tgtatgtaca caccctcacc atcacccca agggcaagga gaac 44

<210> 344

<211> 762

<212> DNA

<213> Homo sapiens

<400> 344  
caacatgggg tccagcagct tcttggtcct catggtgtct ctgcgttctg 50  
tgaccctgggt ggctgtggaa ggagttaaag agggtataga gaaagcaggg 100  
gtttgcccaag ctgacaacgt acgctgcttc aagtccgatc ctccccagtg 150  
tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200  
gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggagggaaac 250  
aaggatgaag atgtgtcaag gccataaccct gagccaggat gggaggccaa 300  
gtgtccaggc tcctcctcta ccaggtgtcc tcagaaatga tgctgggtcc 350  
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gagacttsga atatggaaga agcaatacc aaccccacca aagaaaaacct 450  
gagcttgaag tcctttccc caaaaagagg gaagagtcac aaaaagtcca 500  
gaccccaggg acggtaacttt ccctctctac ctggtgctcc tccctaattgc 550  
tcatgaatgg acccctcatg aatgaaacca gtgccttat aagagacccc 600  
aaagagctgc cttgccttc tgcaatgtgt gatcacagct agaaggcact 650  
gtcagagaag agaaaactggt cctcaccaga tgctgaatct gctgggtcct 700  
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tttataatcc aa 762

<210> 345  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 345  
Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu  
1 5 10 15  
Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
20 25 30  
Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
35 40 45  
Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
50 55 60  
Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
65 70 75  
Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
80 85 90  
Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
95 100 105  
Thr Arg Cys Pro Gln Lys  
110

<210> 346  
<211> 2528  
<212> DNA  
<213> Homo sapiens

<400> 346  
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gccccaggac atgcagaacc ttccctctaga acccgaccca ccaccatgag 150  
gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggcct 200  
tgcttctggc tgtcctggc ttctttctt tcgccttgcc ctctttatt 250  
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agaaaggctt ctacagtccc tggcaaagcc taagtcccag gcacccacaa 350  
gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
ctcaacacac aaacccagcc caaggcccac accaccggag acagagggaa 450  
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cacagagggc agcatggaag agcccagaaa aagagaaaac catggtaac 550  
acactgtcac ccagagggc agatgcaggg atggcctctg gcaggacaga 600  
ggcacaatca tggaaagagcc aggacacaaa gacgacccaa ggaaatgggg 650  
gccagaccag gaagctgacg gcctccagga cggtgtcaga gaagcaccag 700  
ggcaaagcgg caaccacagc caagacgctc attccaaaa gtcagcacag 750  
aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800  
tgaccacagc agtcatccca cctaaggaga agaaacctca ggccacccca 850  
ccccctgccc ctttccagag ccccacgacg cagagaaacc aaagactgaa 900  
ggccgccaac ttcaaattctg agcctcggtg ggatttttag gaaaaataca 950  
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aacactttgc accaccctt ggcttcatgg agctcaacta ctccttggtg 1150  
cagaaggctcg tgacacgctt ccctccagtg ccccagcagc agctgctcct 1200  
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cacgactacg tggcccgatt gagcggagct ctcattaaag gctacgaaca 1350  
ggatgtgggg actcggacat cttctacgg ctttaccgcc ttctccctga 1400  
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gacaggtacc tggtgctgca cccagacttt ctccgataca tgaagaacag 1650  
gtttctgagg tctaagaccc tggatggtgc ccactggagg atataccgc 1700  
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ctactatgat acatcatgga agcggctgat ctttacata aaccatgact 1850  
tcaagctgga gagagaagtc tggaaagcggc tacacgatga agggataatc 1900  
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ggggccaggg ctgccatggt ctccctgcct gctccaaggc acaggataca 2000  
gtggaaatct tgagactctt tggccatttc ccatggctca gactaagctc 2050  
caagcccttc aggagttcca agggAACACT tgaaccatgg acaagactct 2100  
ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150  
ctgttaggtcc tgaggccagg gatTTTAAT taaatgggt gatgggtggc 2200  
caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250  
gatacagaaa aaagagcctg gatttacaga aacatataga tctggttga 2300  
attccagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350  
cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400  
ggtctatact tgtccttgc tttaagctat ttgacaactc tacgtgttgt 2450  
agaaaaactga taataataca aatgattgtt gtccatggaa aggcaaataa 2500  
atTTTCTACA gtgaaaaaaaaaaaaaaa 2528

<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Ile	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
1				5					10					15

Gln	Trp	Ser	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala	
			20				25						30	

Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
				35				40					45	

Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
				50				55					60	

Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

65                    70                    75

Tyr Ala Glu Pro Ala Pro Glu Asn Asn Ala Leu Asn Thr Gln Thr		
80	85	90
Gln Pro Lys Ala His Thr Thr Gly Asp Arg Gly Lys Glu Ala Asn		
95	100	105
Gln Ala Pro Pro Glu Glu Gln Asp Lys Val Pro His Thr Ala Gln		
110	115	120
Arg Ala Ala Trp Lys Ser Pro Glu Lys Glu Lys Thr Met Val Asn		
125	130	135
Thr Leu Ser Pro Arg Gly Gln Asp Ala Gly Met Ala Ser Gly Arg		
140	145	150
Thr Glu Ala Gln Ser Trp Lys Ser Gln Asp Thr Lys Thr Thr Gln		
155	160	165
Gly Asn Gly Gly Gln Thr Arg Lys Leu Thr Ala Ser Arg Thr Val		
170	175	180
Ser Glu Lys His Gln Gly Lys Ala Ala Thr Thr Ala Lys Thr Leu		
185	190	195
Ile Pro Lys Ser Gln His Arg Met Leu Ala Pro Thr Gly Ala Val		
200	205	210
Ser Thr Arg Thr Arg Gln Lys Gly Val Thr Thr Ala Val Ile Pro		
215	220	225
Pro Lys Glu Lys Lys Pro Gln Ala Thr Pro Pro Pro Ala Pro Phe		
230	235	240
Gln Ser Pro Thr Thr Gln Arg Asn Gln Arg Leu Lys Ala Ala Asn		
245	250	255
Phe Lys Ser Glu Pro Arg Trp Asp Phe Glu Glu Lys Tyr Ser Phe		
260	265	270
Glu Ile Gly Gly Leu Gln Thr Thr Cys Pro Asp Ser Val Lys Ile		
275	280	285
Lys Ala Ser Lys Ser Leu Trp Leu Gln Lys Leu Phe Leu Pro Asn		
290	295	300
Leu Thr Leu Phe Leu Asp Ser Arg His Phe Asn Gln Ser Glu Trp		
305	310	315
Asp Arg Leu Glu His Phe Ala Pro Pro Phe Gly Phe Met Glu Leu		
320	325	330
Asn Tyr Ser Leu Val Gln Lys Val Val Thr Arg Phe Pro Pro Val		
335	340	345
Pro Gln Gln Gln Leu Leu Leu Ala Ser Leu Pro Ala Gly Ser Leu		
350	355	360
Arg Cys Ile Thr Cys Ala Val Val Gly Asn Gly Gly Ile Leu Asn		
365	370	375
Asn Ser His Met Gly Gln Glu Ile Asp Ser His Asp Tyr Val Phe		

380	385	390
Arg Leu Ser Gly Ala Leu Ile Lys	Gly Tyr Glu Gln Asp Val Gly	
395	400	405
Thr Arg Thr Ser Phe Tyr Gly Phe Thr Ala Phe Ser Leu Thr Gln		
410	415	420
Ser Leu Leu Ile Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu	
425	430	435
Gly Lys Asp Val Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp	
440	445	450
Tyr Glu Trp Leu Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser	
455	460	465
Lys Asn Leu Phe Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg	
470	475	480
Glu Ala Leu His Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe	
485	490	495
Leu Arg Tyr Met Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp	
500	505	510
Gly Ala His Trp Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu	
515	520	525
Leu Leu Thr Ala Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly	
530	535	540
Phe Ile Thr Glu Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp	
545	550	555
Thr Ser Trp Lys Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys	
560	565	570
Leu Glu Arg Glu Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile	
575	580	585
Arg Leu Tyr Gln Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn	
590	595	600

<210> 348  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

<400> 348  
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 gggccttcgc cggagcagcg agtggaaatt gttcctcgag atctgaggat 100  
 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150  
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200  
 attcctgcat actataaaag atgcgccagg ctctttaccc ggctggctgt 250  
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300  
 accaggagcc atgagaagtg ccttgaaac caacaggaa acagaactat 350

ctttatacac atccctcat ggacaagaga tttatTTTg cagacagact 400  
cttccataag tccttgagt ttgtatgtt gttgacagtt tgcaGATA 450  
tattcgataa atcagtgtac ttgacagtgt tatctgtcac ttattt 496

<210> 349  
<211> 91  
<212> PRT  
<213> Homo sapiens

<400> 349  
Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Val  
1 5 10 15

Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp  
20 25 30

Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu  
35 40 45

Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
50 55 60

Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala  
65 70 75

Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp  
80 85 90

Lys

<210> 350  
<211> 1141  
<212> DNA  
<213> Homo sapiens

<400> 350  
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tgcAGCCAGt ataccatac ccccaggacc ccaaAGCTGG ccctGCACCC 550  
ccacAGCCGT gcttcatgtA cccacCTAGt ggtcctGCTC cccaaatATCC 600

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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

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									20			25		30	
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe	
					35				40					45	
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg	
					50				55					60	
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln	
					65				70					75	
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala	
					80				85					90	
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys	
					95				100					105	
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln	
					110				115					120	
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile	
					125				130					135	
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly	
					140				145					150	
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro	
					155				160					165	
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn	
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Gly Ala

<210> 352

<211> 3226

<212> DNA

<213> Homo sapiens

<400> 352

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tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200

caaaaacgtag ttagggaca ccatttcctt ggaataaaat acgacttcct 250

gagtagtca tcccaatttca ttatgatctc ttgatccatg caaaccttac 300

cacgctgacc ttctgggaa ccacgaaagt agaaatcaca gccagtcagc 350

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tgaccatcc tgaactgaaa gttggagatt atttctttgg caaatgtttt 1300

B  
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<210> 353  
<211> 941  
<212> PRT  
<213> Homo sapiens

<400> 353

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									25					30
Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr
									40					45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro
									55					60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr
									70					75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr
									85					90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala
									100					105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu
									115					120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala
									130					135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His
									145					150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser
									155					165
Thr	Tyr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr
									170					180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp
									185					195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu
									200					210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val

215                    220                    225

Thr Val Ala Glu Gly Leu Ile Glu Asp His Phe Asp Val Thr Val  
       230    235                                  240

Lys Met Ser Thr Tyr Leu Val Ala Phe Ile Ile Ser Asp Phe Glu  
       245    250    255

Ser Val Ser Lys Ile Thr Lys Ser Gly Val Lys Val Ser Val Tyr  
       260    265    270

Ala Val Pro Asp Lys Ile Asn Gln Ala Asp Tyr Ala Leu Asp Ala  
       275    280    285

Ala Val Thr Leu Leu Glu Phe Tyr Glu Asp Tyr Phe Ser Ile Pro  
       290    295    300

Tyr Pro Leu Pro Lys Gln Asp Leu Ala Ala Ile Pro Asp Phe Gln  
       305    310    315

Ser Gly Ala Met Glu Asn Trp Gly Leu Thr Thr Tyr Arg Glu Ser  
       320    325    330

Ala Leu Leu Phe Asp Ala Glu Lys Ser Ser Ala Ser Ser Lys Leu  
       335    340    345

Gly Ile Thr Val Thr Val Ala His Glu Leu Ala His Gln Trp Phe  
       350    355    360

Gly Asn Leu Val Thr Met Glu Trp Trp Asn Asp Leu Trp Leu Asn  
       365    370    375

Glu Gly Phe Ala Lys Phe Met Glu Phe Val Ser Val Ser Val Thr  
       380    385    390

His Pro Glu Leu Lys Val Gly Asp Tyr Phe Phe Gly Lys Cys Phe  
       395    400    405

Asp Ala Met Glu Val Asp Ala Leu Asn Ser Ser His Pro Val Ser  
       410    415    420

Thr Pro Val Glu Asn Pro Ala Gln Ile Arg Glu Met Phe Asp Asp  
       425    430    435

Val Ser Tyr Asp Lys Gly Ala Cys Ile Leu Asn Met Leu Arg Glu  
       440    445    450

Tyr Leu Ser Ala Asp Ala Phe Lys Ser Gly Ile Val Gln Tyr Leu  
       455    460    465

Gln Lys His Ser Tyr Lys Asn Thr Lys Asn Glu Asp Leu Trp Asp  
       470    475    480

Ser Met Ala Ser Ile Cys Pro Thr Asp Gly Val Lys Gly Met Asp  
       485    490    495

Gly Phe Cys Ser Arg Ser Gln His Ser Ser Ser Ser Ser His Trp  
       500    505    510

His Gln Glu Gly Val Asp Val Lys Thr Met Met Asn Thr Trp Thr  
       515    520    525

Leu Gln Arg Gly Phe Pro Leu Ile Thr Ile Thr Val Arg Gly Arg

530	535	540
Asn Val His Met Lys Gln Glu His Tyr Met Lys Gly Ser Asp Gly		
545	550	555
Ala Pro Asp Thr Gly Tyr Leu Trp His Val Pro Leu Thr Phe Ile		
560	565	570
Thr Ser Lys Ser Asn Met Val His Arg Phe Leu Leu Lys Thr Lys		
575	580	585
Thr Asp Val Leu Ile Leu Pro Glu Glu Val Glu Trp Ile Lys Phe		
590	595	600
Asn Val Gly Met Asn Gly Tyr Tyr Ile Val His Tyr Glu Asp Asp		
605	610	615
Gly Trp Asp Ser Leu Thr Gly Leu Leu Lys Gly Thr His Thr Ala		
620	625	630
Val Ser Ser Asn Asp Arg Ala Ser Leu Ile Asn Asn Ala Phe Gln		
635	640	645
Leu Val Ser Ile Gly Lys Leu Ser Ile Glu Lys Ala Leu Asp Leu		
650	655	660
Ser Leu Tyr Leu Lys His Glu Thr Glu Ile Met Pro Val Phe Gln		
665	670	675
Gly Leu Asn Glu Leu Ile Pro Met Tyr Lys Leu Met Glu Lys Arg		
680	685	690
Asp Met Asn Glu Val Glu Thr Gln Phe Lys Ala Phe Leu Ile Arg		
695	700	705
Leu Leu Arg Asp Leu Ile Asp Lys Gln Thr Trp Thr Asp Glu Gly		
710	715	720
Ser Val Ser Glu Gln Met Leu Arg Ser Glu Leu Leu Leu Leu Ala		
725	730	735
Cys Val His Asn Tyr Gln Pro Cys Val Gln Arg Ala Glu Gly Tyr		
740	745	750
Phe Arg Lys Trp Lys Glu Ser Asn Gly Asn Leu Ser Leu Pro Val		
755	760	765
Asp Val Thr Leu Ala Val Phe Ala Val Gly Ala Gln Ser Thr Glu		
770	775	780
Gly Trp Asp Phe Leu Tyr Ser Lys Tyr Gln Phe Ser Leu Ser Ser		
785	790	795
Thr Glu Lys Ser Gln Ile Glu Phe Ala Leu Cys Arg Thr Gln Asn		
800	805	810
Lys Glu Lys Leu Gln Trp Leu Leu Asp Glu Ser Phe Lys Gly Asp		
815	820	825
Lys Ile Lys Thr Gln Glu Phe Pro Gln Ile Leu Thr Leu Ile Gly		
830	835	840
Arg Asn Pro Val Gly Tyr Pro Leu Ala Trp Gln Phe Leu Arg Lys		

845	850	855
Asn Trp Asn Lys Leu Val Gln Lys Phe Glu Leu Gly Ser Ser Ser		
860	865	870
Ile Ala His Met Val Met Gly Thr Thr Asn Gln Phe Ser Thr Arg		
875	880	885
Thr Arg Leu Glu Glu Val Lys Gly Phe Phe Ser Ser Leu Lys Glu		
890	895	900
Asn Gly Ser Gln Leu Arg Cys Val Gln Gln Thr Ile Glu Thr Ile		
905	910	915
Glu Glu Asn Ile Gly Trp Met Asp Lys Asn Phe Asp Lys Ile Arg		
920	925	930
Val Trp Leu Gln Ser Glu Lys Leu Glu Arg Met		
935	940	

<210> 354  
<211> 1587  
<212> DNA  
<213> Homo sapiens

<400> 354  
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aatggccttg gacaccagat tcttcccat tctgtccatg aatcatctc 1450  
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gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met Ser Ala Val Leu Leu Leu Ala Leu Leu Gly Phe Ile Leu Pro  
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Leu Pro Gly Val Gln Ala Leu Leu Cys Gln Phe Gly Thr Val Gln  
20 25 30

His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys  
35 40 45

Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met  
50 55 60

Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly  
65 70 75

Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg  
80 85 90

Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg  
95 100 105

Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp  
110 115 120

Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val  
125 130 135

Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile  
140 145 150

Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu

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Arg Gly Gly Gly Ile Phe Ser Asn Leu Arg Val Gln Gly Cys Met		
170	175	180
Pro Gln Pro Gly Cys Asn Leu Leu Asn Gly Thr Gln Glu Ile Gly		
185	190	195
Pro Val Gly Met Thr Glu Asn Cys Asn Arg Lys Asp Phe Leu Thr		
200	205	210
Cys His Arg Gly Thr Thr Ile Met Thr His Gly Asn Leu Ala Gln		
215	220	225
Glu Pro Thr Asp Trp Thr Thr Ser Asn Thr Glu Met Cys Glu Val		
230	235	240
Gly Gln Val Cys Gln Glu Thr Leu Leu Ile Asp Val Gly Leu		
245	250	255
Thr Ser Thr Leu Val Gly Thr Lys Gly Cys Ser Thr Val Gly Ala		
260	265	270
Gln Asn Ser Gln Lys Thr Thr Ile His Ser Ala Pro Pro Gly Val		
275	280	285
Leu Val Ala Ser Tyr Thr His Phe Cys Ser Ser Asp Leu Cys Asn		
290	295	300
Ser Ala Ser Ser Ser Val Leu Leu Asn Ser Leu Pro Pro Gln		
305	310	315
Ala Ala Pro Val Pro Gly Asp Arg Gln Cys Pro Thr Cys Val Gln		
320	325	330
Pro Leu Gly Thr Cys Ser Ser Gly Ser Pro Arg Met Thr Cys Pro		
335	340	345
Arg Gly Ala Thr His Cys Tyr Asp Gly Tyr Ile His Leu Ser Gly		
350	355	360
Gly Gly Leu Ser Thr Lys Met Ser Ile Gln Gly Cys Val Ala Gln		
365	370	375
Pro Ser Ser Phe Leu Leu Asn His Thr Arg Gln Ile Gly Ile Phe		
380	385	390
Ser Ala Arg Glu Lys Arg Asp Val Gln Pro Pro Ala Ser Gln His		
395	400	405
Glu Gly Gly Ala Glu Gly Leu Glu Ser Leu Thr Trp Gly Val		
410	415	420
Gly Leu Ala Leu Ala Pro Ala Leu Trp Trp Gly Val Val Cys Pro		
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Ser Cys

<210> 356  
<211> 1238  
<212> DNA  
<213> Homo sapiens

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 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
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 aaaatgaaag tggcctggg gtgcgtctc tgaagaagca gagtttcatt 1100  
 acctgtattt tagccccat gtcattatgt aattattacc cagaattgct 1150  
 cttccataaa gcttgcgcct ttgtccaagc tatacaataa aatctttaag 1200  
 tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357  
<211> 271  
<212> PRT  
<213> Homo sapiens

<400> 357  
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 1 5 10 15  
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp  
 20 25 30

Asp Ala Cys Ser Val Gln Ile Leu Val Pro Gly Leu Lys Gly Asp  
                  35                        40                        45  
 Ala Gly Glu Lys Gly Asp Lys Gly Ala Pro Gly Arg Pro Gly Arg  
                  50                        55                        60  
 val Gly Pro Thr Gly Glu Lys Gly Asp Met Gly Asp Lys Gly Gln  
                  65                        70                        75  
 Lys Gly Ser Val Gly Arg His Gly Lys Ile Gly Pro Ile Gly Ser  
                  80                        85                        90  
 Lys Gly Glu Lys Gly Asp Ser Gly Asp Ile Gly Pro Pro Gly Pro  
                  95                        100                       105  
 Asn Gly Glu Pro Gly Leu Pro Cys Glu Cys Ser Gln Leu Arg Lys  
                  110                       115                       120  
 Ala Ile Gly Glu Met Asp Asn Gln Val Ser Gln Leu Thr Ser Glu  
                  125                       130                       135  
 Leu Lys Phe Ile Lys Asn Ala Val Ala Gly Val Arg Glu Thr Glu  
                  140                       145                       150  
 Ser Lys Ile Tyr Leu Leu Val Lys Glu Glu Lys Arg Tyr Ala Asp  
                  155                       160                       165  
 Ala Gln Leu Ser Cys Gln Gly Arg Gly Gly Thr Leu Ser Met Pro  
                  170                       175                       180  
 Lys Asp Glu Ala Ala Asn Gly Leu Met Ala Ala Tyr Leu Ala Gln  
                  185                       190                       195  
 Ala Gly Leu Ala Arg Val Phe Ile Gly Ile Asn Asp Leu Glu Lys  
                  200                       205                       210  
 Glu Gly Ala Phe Val Tyr Ser Asp His Ser Pro Met Arg Thr Phe  
                  215                       220                       225  
 Asn Lys Trp Arg Ser Gly Glu Pro Asn Asn Ala Tyr Asp Glu Glu  
                  230                       235                       240  
 Asp Cys Val Glu Met Val Ala Ser Gly Gly Trp Asn Asp Val Ala  
                  245                       250                       255  
 Cys His Thr Thr Met Tyr Phe Met Cys Glu Phe Asp Lys Glu Asn  
                  260                       265                       270

Met

<210> 358  
 <211> 972  
 <212> DNA  
 <213> Homo sapiens

<400> 358  
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 gagcaccggc agcaccagtg tgtgagggga gcagggcagcg gtccttagcca 100  
 gttccttgat cctgccagac cacccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
tagctcagag ctttggggct gtctgttaagg agccacagga ggaggtggtt 250  
cctggcgaaa gcccagcaa gagggatcca gatctctacc agctgctcca 300  
gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350  
gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400  
atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450  
gggaaagaca ggacctttct taccttcagt gagggttcct cgcccccttc 500  
atcccaatca gcttggatcc acaggaaagt ctccctggg aacagaggag 550  
cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600  
cagctttggc atcctaagt atccccgag agcagaatag gtactccact 650  
tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700  
caggtgcgca cgctcctgtt acccttctc ttccctgttc ttgtaacatt 750  
cttgtgctt gactccttct ccatctttc tacctgaccc tggtgtggaa 800  
actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaataacc 850  
ctagagttcc tgttagtgtcc tacattaaaa atataatgtc totctctatt 900  
cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950  
aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu
1				5					10					15

Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20				25						30

Val	Pro	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	
			35				40							45

Leu	Leu	Gln	Arg	Ile	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
	50						55							60

Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
	65							70						75

Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
			80					85						90

Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
	95							100						105

Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
			110					115						120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu  
125 130 135

<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

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gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcggcc 150

agctctgccccc caggagccca ggctgccccg tgagtccat agttgctgca 200

ggagtggagc catgagctgc gtctgggtg gtgtcatccc cttggggctg 250

ctgttcctgg tctgcggatc ccaaggctac ctcctgcccc acgtcaactct 300

cttagaggag ctgctcagca aataccagca caacgagtct cactcccccgg 350

tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400

aacaagcttc gggggccaggt gcagcctcaag gcctccaaca tggagtacat 450

gttgagcgcc ggctccggcc gcagaggctg gcaccgggggg tggggcctgg 500

gccaccagcc tgctctgttc cccagccagc tctgttcccc agccagtgcg 550

tgtgatggct ggctcagggt ctccctctggc aggggaggat cccggctctg 600

ttctgttttg tttgtttgtt ttgagacagg gtctcaactt gccactgacg 650

ctggagtgca atggcacaat cgtcatgcccc tgaaacctta gactcccccgg 700

gttaaggcgt cctgcttcag cctcccaagt agctggaact acaggcatgc 750

accatgggtgc ccagctagat tttaaatatt ttgtggagat gggggtcttg 800

ctacgttgcc caggctggtc ttgaactcct aggctcaagc aatcctcctg 850

cctcagcctc tcaaagtgtct aggattatacg gcatgagtca ccctgtctgg 900

ctctggctct gttttaaca ttctgccaaa acaacacacg tgggttccct 950

gtgcagagcc tgccctcggtt cttcatgtc actcttggta gctccactgg 1000

gaacacagct ctcagccttt cccacctgga ggcagagtgg ggagggggccc 1050

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accacccctga cttctcccta gcccgtgtga gcctcaactt ccacttggag 1150

agtccttcct cgcgtgggtt ccatgactgt gagataagtc gaggctgtga 1200

agggccccggc acagactgac ctgcctcccc aacccttagg ctttgctaac 1250

cgggaaagga gctaacggtg acagaagaca gccaaaggta accctcccccgg 1300

gtgattgtga tgggtgttcc aggtgtggtt gggcgatgtc gctacttgac 1350

cccaagctcc agtgtggaaa cttccttcct ggctggttt ccagaactac 1400  
agaggaatgg accacagtct tccagggtcc ctccctcggtcc accaaccggg 1450  
agcctccacc ttggccatcc gtcagctatg aatggcttt taaacaaacc 1500  
cacgtcccag cctggtaac atggtaaagc cccgtctcta caaaaaaatac 1550  
caagtttagcc gggcatggtg gtgcgcacct gtagtcccag ctgcagtggg 1600  
actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650  
ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700  
tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361  
<211> 159  
<212> PRT  
<213> Homo sapiens

<400> 361  
Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe  
1 5 10 15  
Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu  
20 25 30  
Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser  
35 40 45  
Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu  
50 55 60  
Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser  
65 70 75  
Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp  
80 85 90  
His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser  
95 100 105  
Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val  
110 115 120  
Ser Ser Gly Arg Gly Ser Arg Leu Cys Ser Val Leu Phe Val  
125 130 135  
Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln  
140 145 150  
Trp His Asn Arg His Ala Leu Lys Pro  
155

<210> 362  
<211> 422  
<212> DNA  
<213> Homo sapiens

<400> 362  
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ggccactatg gggctctggc tgccccttgt cctcccttgc accctccttg 100  
gcagctcaca tggAACAGGG CCGGGTATGA CTTCGCAACT GAAGCTGAAG 150  
gagtcttttc tgacaaattc ctcctatgag tccagcttcc tggAAATTGCT 200  
tgaaaagctc tgcctcctcc tccatctccc ttcaGGGACC AGCGTCACCC 250  
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagCCA 300  
ttgaAGCCTG TGTCCCTCTT GGCCCAGGCT TTTGGGCCGG GGATGCAGGA 350  
ggcaggCCCC GACCCTGTCT TTCAGCAGGC CCCACCCCTC CTGAGTGGCA 400  
ataaataaaaa ttCGGTATGC TG 422

<210> 363

<211> 78

<212> PRT

<213> Homo sapiens

<400> 363

Met	Gly	Ser	Gly	Leu	Pro	Ieu	Val	Leu	Leu	Leu	Thr	Ieu	Leu	Gly
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Ser	Ser	His	Gly	Thr	Gly	Pro	Gly	Met	Thr	Ieu	Gln	Ieu	Lys	Ieu
				20					25			30		
Lys	Glu	Ser	Phe	Leu	Thr	Asn	Ser	Ser	Tyr	Glu	Ser	Ser	Phe	Ieu
	35							40					45	
Glu	Ieu	Ieu	Glu	Lys	Ieu	Cys	Ieu	Ieu	Ieu	His	Ieu	Pro	Ser	Gly
			50					55				60		
Thr	Ser	Val	Thr	Ieu	His	His	Ala	Arg	Ser	Gln	His	His	Val	Val
		65						70				75		

Cys Asn Thr

<210> 364

<211> 826

<212> DNA

<213> Homo sapiens

<400> 364

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ctttctgagt ttcaaaaaaca acagactagt actctaaaga actctttaaa 100  
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150  
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200  
attgcagaag cttcattcag tggaaat gaatgcttag tggatctgtg 250  
cctcttacgc atatgttaca aattatctgg agttcctaatt caatgcagag 300  
ttccccctccc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350  
aaaaggcatg tatttaatc tggatgattc tcaaccatct ttagttggga 400  
aaggcttgc aaagccatg gaaatacttt tttttttct tggcactaat 450

caagtgagtg ttacctttc acttagtagg atgtgttgtt acgctagtaa 500  
aatagaaacc tgtgtttatt ctcaggtatt ttagaaacaa cagccatcat 550  
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600  
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttgtt 650  
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700  
ttgttgaat agcctttgaa attacagta ctgtctctct actatcttca 750  
gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800  
accagaataa aagttcatat ctaccc 826

<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

Met	Ile	Gly	Tyr	Tyr	Leu	Ile	Leu	Phe	Leu	Met	Trp	Gly	Ser	Ser
1					5				10				15	
Thr	Val	Phe	Cys	Val	Leu	Leu	Ile	Phe	Thr	Ile	Ala	Glu	Ala	Ser
	20							25				30		
Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
	35							40				45		
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
	50							55				60		
Leu	Pro	Ser	Asp	Cys	Ser	Lys								
	65													

<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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tttgcagga tggatggcgc cttcgagga gcttctgcat tgctggttct 150  
gttccttgcg gctttctgc ccccgccgca gtgtacccag gaccgcgcca 200  
tggtgcatca catctaccag cgcttcgag tcttggagca agggctggaa 250  
aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300  
aaaaaaatata tctgtcatgc tggaaagatg tcagacctac acaagtgagt 350  
acaagagtc agtggtaac ttggcactga gagttgaacg tgcccaacgg 400  
gagattgact acatacaata cttcgagag gctgacgagt gcatcgtatc 450  
agaggacaag acactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatggc 550  
ataaaagtctt tgaaaatagt gaagaagatg atggacacac atggctttg 600  
gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650  
ccagaaacaa cactgttgg gaatttgcaa acatacggc attcatggag 700  
gataacacca agccagctcc ccggaagcaa atcctaacad tttcctggca 750  
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ccatccactc tggccaggc acccatagcc atttggttct cacaaagatt 1000  
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acagtactgg gggccaggc cctcatcgca tcacactgcat ctatgatcca 1150  
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accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250  
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aagctgcctc tgaagtaatg cattacagct gtgagaaaga gcaactgtggc 1350  
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cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250  
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cagttttcat gtctgcacaa gaccttcaa taggccttcc aaatgataat 2350  
tcctccagaa aaccagtcta agggtgagga ccccaactct agcctcctct 2400  
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gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

Met	Met	Val	Ala	Leu	Arg	Gly	Ala	Ser	Ala	Leu	Leu	Val	Leu	Phe
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Leu	Ala	Ala	Phe	Leu	Pro	Pro	Pro	Gln	Cys	Thr	Gln	Asp	Pro	Ala
				20					25					30
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly
				35					40					45
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe
				50					55					60
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln
				65					70					75
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu
				80					85					90
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu
				95					100					105
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala
				110					115					120
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr
				125					130					135
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser
				140					145					150
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met
				155					160					165
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly
				170					175					180
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe
				185					190					195
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr
				200					205					210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu  
 215 220 225  
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn  
 230 235 240  
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly  
 245 250 255  
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile  
 260 265 270  
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly  
 275 280 285  
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly  
 290 295 300  
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln  
 305 310 315  
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val  
 320 325 330  
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr  
 335 340 345  
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe  
 350 355 360  
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro  
 365 370 375  
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile  
 380 385 390  
 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys  
 395 400

<210> 368  
 <211> 2281  
 <212> DNA  
 <213> Homo sapiens

<400> 368  
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 agctctcgca gatgtcggag ctcatggggc tgtcggtgtt gcttgggtcg 100  
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150  
 ggaggagagg agcggccggc ccgcctgccaa aaaagcaaattt ggatttccac 200  
 ctgacaaaatc ttccggatcc aagaaggcaga aacaatatca gcggattcgg 250  
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300  
 tctgaagagc cacagcggga acatatcttgcatggactttt agcagcaatg 350  
 gcaaataacctt ggctcacctgt gcagatgtc gcaccatccg catctggaggc 400  
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgactgc agagccttca 500  
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cggggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600  
aaagcacaag gcgcctgtca tcgacattgg cattgctaac acagggaaat 650  
ttatcatgac tgcctccagt gacaccactg tcctcatctg gagcctgaag 700  
ggtcaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750  
tgctgtatct ccctgtggca gatttgttagc ctcgtgtggc ttcacccag 800  
atgtgaaggt ttgggaagtc tgctttggaa agaaggggaa gttccaggag 850  
gtggtgcgag cttcgaact aaagggccac tccgcggctg tgcactcggt 900  
tgctttctcc aacgactcac ggaggatggc ttctgtctcc aaggatggta 950  
catggaaact gtggacaca gatgtggaat acaagaagaa gcaggacccc 1000  
tacttgctga agacaggccg ctggaaagag gcggcgggtg ccgcgcctg 1050  
ccgcctggcc ctctccccca acgcccaggt ctggccttg gccagtggca 1100  
gtagtattca tctctacaat acccggcggg gcgagaagga ggagtgcctt 1150  
gagcgggtcc atggcgagtg tatcgccaac ttgtccttgc acatcaactgg 1200  
ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttcacaaca 1250  
ctcctggcca ccgagccatg gtggaggaga tgcaggcca cctgaagcgg 1300  
gcctccaacg agagcaccgg ccagaggctg cagcagcagc tgacccaggg 1350  
ccaagagacc ctgaagagcc tgggtgcctt gaagaagtga ctctggagg 1400  
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ctgccatctt tcctccagg tggaagcctt tcagaaggag tctcctgggt 1500  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369  
 <211> 447  
 <212> PRT  
 <213> Homo sapiens

<400> 369  
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 Leu Gly Leu Leu Ala Leu Met Ala Thr Ala Ala Val Ala Arg Gly  
 20 25 30  
 Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln  
 35 40 45  
 Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys  
 50 55 60  
 Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His  
 65 70 75  
 Asn Phe Thr His Arg Leu Leu Ala Ala Leu Lys Ser His Ser  
 80 85 90  
 Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu  
 95 100 105  
 Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys  
 110 115 120  
 Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu  
 125 130 135  
 Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala  
 140 145 150  
 Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys  
 155 160 165  
 Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro  
 170 175 180  
 Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly  
 185 190 195  
 Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr  
 200 205 210  
 Thr Val Leu Ile Trp Ser Leu Lys Gly Gln Val Leu Ser Thr Ile  
 215 220 225  
 Asn Thr Asn Gln Met Asn Asn Thr His Ala Ala Val Ser Pro Cys  
 230 235 240

Gly Arg Phe Val Ala Ser Cys Gly Phe Thr Pro Asp Val Lys Val  
245 250 255

Trp Glu Val Cys Phe Gly Lys Lys Gly Glu Phe Gln Glu Val Val  
260 265 270

Arg Ala Phe Glu Leu Lys Gly His Ser Ala Ala Val His Ser Phe  
275 280 285

Ala Phe Ser Asn Asp Ser Arg Arg Met Ala Ser Val Ser Lys Asp  
290 295 300

Gly Thr Trp Lys Leu Trp Asp Thr Asp Val Glu Tyr Lys Lys Lys  
305 310 315

Gln Asp Pro Tyr Leu Leu Lys Thr Gly Arg Phe Glu Glu Ala Ala  
320 325 330

Gly Ala Ala Pro Cys Arg Leu Ala Leu Ser Pro Asn Ala Gln Val  
335 340 345

Leu Ala Leu Ala Ser Gly Ser Ser Ile His Leu Tyr Asn Thr Arg  
350 355 360

Arg Gly Glu Lys Glu Glu Cys Phe Glu Arg Val His Gly Glu Cys  
365 370 375

Ile Ala Asn Leu Ser Phe Asp Ile Thr Gly Arg Phe Leu Ala Ser  
380 385 390

Cys Gly Asp Arg Ala Val Arg Leu Phe His Asn Thr Pro Gly His  
395 400 405

Arg Ala Met Val Glu Glu Met Gln Gly His Leu Lys Arg Ala Ser  
410 415 420

Asn Glu Ser Thr Arg Gln Arg Leu Gln Gln Leu Thr Gln Ala  
425 430 435

Gln Glu Thr Leu Lys Ser Leu Gly Ala Leu Lys Lys  
440 445

<210> 370  
<211> 1415  
<212> DNA  
<213> Homo sapiens

<400> 370  
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ccacgcgagt ctcaatcatg ctccctcttag taactgtgtc tgactgtgct 150  
gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg cagggcacctg 200  
ctgtgccatc agcctgtggc ttcgagggtc gcggatgtgc accccgctgg 250  
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aggaaacgca agcaccacac ctgtccttgc ttgccaacc tgctgtgctc 350  
caggttcccc gacggcaggt accgctgctc catggacttg aagaacatca 400

attttttagc gcttcctgg tctcaggata cccaccatcc ttttcctgag 450  
cacagcctgg atttttatTT ctgccatgaa acccagctcc catgactctc 500  
ccagtccta cactgactac cctgatctc cttgtctagt acgcacatat 550  
gcacacagc agacataacct cccatcatga catggcccc aggctggcct 600  
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aatcagcccc ctgaagactc tggcccagt cagcctgtgg cttgtggcct 1050  
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accacactt accagttaac cactgaagcc cccaattccc acagctttc 1150  
cattaaaatg caaatgggtgg tggttcaatc taatctgata ttgacatatt 1200  
agaaggcaat taggggttt ccttaaacaa ctccttcca aggatcagcc 1250  
ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300  
ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350  
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caccaactga aaaaaa 1415

<210> 371  
<211> 105  
<212> PRT  
<213> Homo sapiens

<400> 371  
Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr  
1 5 10 15  
Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val  
20 25 30  
Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg  
35 40 45  
Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
50 55 60  
His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His  
65 70 75

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro  
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe  
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150  
acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200  
gaggatatacg acctgaaaaac actggagaag gaaccaagga ctttcaaagc 250  
aaaggagcta tggaaaaaaa atggagctgt gattatggcc gtgcggaggc 300  
caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350  
agcatgttgg accagctggg cgtccccctc tatcagtgaa taaaggagca 400  
catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450  
tcctggatga aaagaaaaag ttctatggtc cacaaaggcg gaagatgtg 500  
tttatggat ttatccgtct gggagtggtg tacaacttct tccgagcctg 550  
gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600  
gagtttcgt ggtggatca gaaaaaggcagg gcattttct tgagcacccga 650  
gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700  
taagatgtac aaaccacaga ctttggctc agaaaaaaa tgattgtgtg 750  
aaactgcca gctcaggat aaccaggac attcacctgt gttcatggg 800  
tgtattgttt ccactcgtgt ccctaaggag tgagaaaccc atttatactc 850  
tactctcagt atggatttatt aatgtatttt aatattctgt ttaggcccac 900  
taaggcaaaa tagccccaaa acaagactga caaaaatctg aaaaactaat 950  
gaggattatt aagctaaaac ctggaaata ggaggcttaa aattgactgc 1000  
caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050  
aaggtgagca agtcaacttga ggtcgaggat tcgagaccag cctgagcaac 1100  
atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtgg 1150  
ggcaggcacc tgttagtccca gctacccggg aggctgaggc aggagaatca 1200  
cttgaacctg ggaggtggag gttgcgggtga gctgagatca caccactgt 1250  
ttccagccctg ggtgactgag actctaacta a 1281

<210> 373  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 373

Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp  
1 5 10 15

Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Ala Leu Ala Leu Leu  
20 25 30

Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala  
35 40 45

Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu  
50 55 60

Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala  
65 70 75

Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu  
80 85 90

Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu  
95 100 105

Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu  
110 115 120

Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp  
125 130 135

Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe  
140 145 150

Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala  
155 160 165

Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile  
170 175 180

Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu  
185 190 195

Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu  
200 205 210

Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala  
215 220 225

Ser Glu Lys Lys

<210> 374  
<211> 744  
<212> DNA  
<213> Homo sapiens

<400> 374

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caaagacgcc cggcccaagg gccccgtcgc aggtgcccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttcctcgccg ctgccaaccc 150  
gccacccagc ccatggcgaa cccccgggtg gggctgcttc tggcgctggg 200  
cctgcccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250  
ccacttctgc aaatgagaat agcactgttt tgccttcatc caccagctcc 300  
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtgg 350  
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcactgttgg 400  
tgccgaagct tcgggagaag cgccagacgg agggcaccta ccggcccagt 450  
agcgaggagc agttctccca tgcagccgag gcccgccccc ctcaggactc 500  
caaggagacg gtgcagggct gcctgcccatt ctaggtcccc tctcctgcat 550  
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ggcagtcag atccacccag tgcttaatag cagggaaagaa ggtacttcaa 650  
agactctgcc octgaggtca agagaggatg gggctattca ctttatata 700  
tttatataaaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Ley	Ala	Leu	Gly	Leu	Pro
1				5				10						15

Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30

Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45

Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60

Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
			65						70					75

Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90

Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105

Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376  
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 tttctgtcac tattattatt gttggatgt gaagctattt ggagatccaa 150  
 ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200  
 agaaccacag tcaacccaca caatcatctt tagaagacag tgtgactcct 250  
 accaaagctg tcaaaaaccac aggcaaggc atagttaaag gacggaatct 300  
 tgactcaaga gggtaattc ttggtgctga agcctgggc aggggtgtaa 350  
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 tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450  
 attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500  
 taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550  
 acaggagatc atataatttg atacaataa aagaaaagtg ttctctcccc 600  
 ttacagaatt gacatttaa atgcgataca gttagaatag gaaatatgac 650  
 attagaaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700  
 aaggaaaaaaa aaa 713

&lt;210&gt; 377

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 377

Met	Thr	Phe	Phe	Leu	Ser	Leu	Leu	Leu	Leu	Val	Cys	Glu	Ala
1				5				10				15	

Ile	Trp	Arg	Ser	Asn	Ser	Gly	Ser	Asn	Thr	Leu	Glu	Asn	Gly	Tyr
									20					30

Phe	Leu	Ser	Arg	Asn	Lys	Glu	Asn	His	Ser	Gln	Pro	Thr	Gln	Ser
					35				40					45

Ser	Leu	Glu	Asp	Ser	Val	Thr	Pro	Thr	Lys	Ala	Val	Lys	Thr	Thr
					50				55					60

Gly	Lys	Gly	Ile	Val	Lys	Gly	Arg	Asn	Leu	Asp	Ser	Arg	Gly	Leu
					65				70					75

Ile	Leu	Gly	Ala	Glu	Ala	Trp	Gly	Arg	Gly	Val	Lys	Lys	Asn	Thr
					80				85					90

&lt;210&gt; 378

&lt;211&gt; 3265

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 378

gccaggaata actagagagg aacaatgggg ttattcagag gttttgttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaataacttcc ttcattaaggc 100  
tgaataataa tggcttgaa gatattgtca ttgttataga tcctagtgtg 150  
ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200  
ttctacgtac ctgttgaag ccacagaaaa aagattttt ttcaaaaatg 250  
tatctatatt aattcctgag aatttggagg aaaatcctca gtacaaaagg 300  
ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350  
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cctccgggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550  
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ggtagaaata gagtttataa gtgtcaagga ggcagctgat ttagtagagc 650  
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cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950  
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tgaatcaagc agcaaaacat ttcctgctgc agactgttga aaatggatcc 1050  
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ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttcccagg 1850  
cccaatgatt gtttacgcag aaattctaca aggatatgtt cctgttctt 1900  
gagccaatgt gactgcttcc attgaatcac agaatggaca tacagaagtt 1950  
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agtctactcc aggtatTTTc cagcatatac agaaaatggc agatatagct 2050  
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cctccactga atagagccgc gtacatacca ggctggtag tgaacggga 2150  
aattgaagca aaccgcCAA gacctgaaat tgatgaggat actcagacca 2200  
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caagtcccaa gcctccctt gcctgaccaa taccaccaa gtcaaattcac 2300  
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caccaggaga taatTTTgat gttggaaaag ttcaacgtt tatcataaga 2400  
ataagtgcaa gtattcttga tctaagagac agtttgatg atgctcttca 2450  
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cattgcacAA gtaactttgt ttatccctca agcaaattcct gatgacattt 2650  
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gatatttcaa attgcataa gaaattaaaa tcatacttatc gagtagtcaa 3150  
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aaaaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu
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Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
					20				25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
					35				40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
					50				55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
					65				70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
					80				85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
					95				100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
					110				115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
					125				130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
					140				145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
					155				160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
					170				175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
					185				190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
					200				205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
					215				220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
					230				235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
					245				250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
					260				265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

275                    280                    285

Ile Pro Met Val Thr Pro Pro Pro Pro Pro Val Phe Ser Leu Leu		
290	295	300
Lys Ile Ser Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly		
305	310	315
Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala		
320	325	330
Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly		
335	340	345
Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile		
350	355	360
Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu		
365	370	375
Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys		
380	385	390
Tyr Ala Phe Gln Val Ile Gly Glu Leu His Ser Gln Leu Asp Gly		
395	400	405
Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser		
410	415	420
Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe		
425	430	435
Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser		
440	445	450
Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln		
455	460	465
Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn		
470	475	480
Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu		
485	490	495
Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp		
500	505	510
Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser		
515	520	525
Leu Pro Pro Ser Ile Ser Leu Trp Asp Pro Ser Gly Thr Ile Met		
530	535	540
Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser		
545	550	555
Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln		
560	565	570
Ala Lys Ala Asn Pro Glu Thr Leu Thr Ile Thr Val Thr Ser Arg		
575	580	585
Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met		

590	595	600
Asn Lys Asp Val Asn Ser Phe Pro Ser Pro Met Ile Val Tyr Ala		
605	610	615
Glu Ile Leu Gln Gly Tyr Val Pro Val Leu Gly Ala Asn Val Thr		
620	625	630
Ala Phe Ile Glu Ser Gln Asn Gly His Thr Glu Val Leu Glu Leu		
635	640	645
Leu Asp Asn Gly Ala Gly Ala Asp Ser Phe Lys Asn Asp Gly Val		
650	655	660
Tyr Ser Arg Tyr Phe Thr Ala Tyr Thr Glu Asn Gly Arg Tyr Ser		
665	670	675
Leu Lys Val Arg Ala His Gly Gly Ala Asn Thr Ala Arg Leu Lys		
680	685	690
Leu Arg Pro Pro Leu Asn Arg Ala Ala Tyr Ile Pro Gly Trp Val		
695	700	705
Val Asn Gly Glu Ile Glu Ala Asn Pro Pro Arg Pro Glu Ile Asp		
710	715	720
Glu Asp Thr Gln Thr Thr Leu Glu Asp Phe Ser Arg Thr Ala Ser		
725	730	735
Gly Gly Ala Phe Val Val Ser Gln Val Pro Ser Leu Pro Leu Pro		
740	745	750
Asp Gln Tyr Pro Pro Ser Gln Ile Thr Asp Leu Asp Ala Thr Val		
755	760	765
His Glu Asp Lys Ile Ile Leu Thr Trp Thr Ala Pro Gly Asp Asn		
770	775	780
Phe Asp Val Gly Lys Val Gln Arg Tyr Ile Ile Arg Ile Ser Ala		
785	790	795
Ser Ile Leu Asp Leu Arg Asp Ser Phe Asp Asp Ala Leu Gln Val		
800	805	810
Asn Thr Thr Asp Leu Ser Pro Lys Glu Ala Asn Ser Lys Glu Ser		
815	820	825
Phe Ala Phe Lys Pro Glu Asn Ile Ser Glu Glu Asn Ala Thr His		
830	835	840
Ile Phe Ile Ala Ile Lys Ser Ile Asp Lys Ser Asn Leu Thr Ser		
845	850	855
Lys Val Ser Asn Ile Ala Gln Val Thr Leu Phe Ile Pro Gln Ala		
860	865	870
Asn Pro Asp Asp Ile Asp Pro Thr Pro Thr Pro Thr Pro Thr Pro		
875	880	885
Thr Pro Asp Lys Ser His Asn Ser Gly Val Asn Ile Ser Thr Leu		
890	895	900
Val Leu Ser Val Ile Gly Ser Val Val Ile Val Asn Phe Ile Leu		

905

910

915

Ser Thr Thr Ile

<210> 380  
<211> 3877  
<212> DNA  
<213> Homo sapiens

<400> 380  
ctccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50  
aagaccatac gtccccgggc aggggtgaca acaggtgtca tcttttgat 100  
ctcggtgtg gtcgcattcc tatttcaagg aaagacgcca aggttaatttt 150  
gaccaggagg agcaatgatg tagccaccc tcacccctcc cttcttgaac 200  
ccccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250  
gctccttcgg cttaacttgt gttggagga gagaacctt gtggggctgc 300  
gttctcttag cagtgtcag aagtgacttg cctgagggtg gaccagaaga 350  
aaggaaaggt cccctcttc tggtggctgc acatcaggaa ggctgtgatg 400  
ggaatgaagg tgaaaacttg gagattcac ttcatgtcatt gcttctgcct 450  
gcaagatcat ccttaaaag tagagaagct gctctgtgt gtggtaact 500  
ccaagaggca gaactcggttc tagaaggaaa tggatgcaag cagctccggg 550  
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cagccccacg gggaaaggagg ggtaccaggc cgtccttcag gagtgggagg 850  
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cccaggccga cctcctggcc ttccctgcact cgcaggtgga caaggcagag 1050  
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tagctttact ctacagaagg tgtaccagct ggagactggc cttacccgcc 1150  
accccgagga gaaggctgtg aggaaggaca agcgggatga gttggtgaa 1200  
gccattgaat cagccttgga gaccctgaac aatcctgcag agaacagccc 1250  
caatcaccgt ctttacacgg cctctgattt catagaaggg atctaccgaa 1300

cagaaaggga caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350  
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gaaagtgaaa aatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450  
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tagaggctca cttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250  
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cctgttgttt tgttgctca ttgaaatatt catgattaa gagcagttt 2600  
gtaaaaaaatt cattagcatg aaaggcaagc atatttctcc tcatatgaat 2650  
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taaaatggac cagaaaagaa aagaaaccat aaatatcgtg tcataatttc 2800  
cccaagatta accaaaaata atctgcttat ctgggtt gtcctttaa 2850  
ctgtctccgt tttttcttt tatttaaaaa tgcactttt ttcccttg 2900

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acaagttggc ctacatTTT atatTTTta agaagatact ttgagatgca 3000  
ttatgagaac tttcagttca aagcatcaa ttgatgccat atccaaggac 3050  
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agtatTTTCG aagaggagca actgaacact ggaggaaaag aaaatgacac 3200  
tttctgctt acagaaaagg aaactcattc agactggta tATCGTGTG 3250  
tacctaaaag tcagaaacca cattttctcc tcagaagtag ggaccgcTTT 3300  
cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350  
tttcaaaaca gggTgCTCCT CCTGGCTTCT ggCTTCCATA agaAGAAATG 3400  
gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450  
ccagaatcta gtgggatgga agTTTTGCT acatgttac caccccaggc 3500  
caggtggaag taactgaatt atTTTTaaa ttaAGCAGTT ctactcaatc 3550  
accaagatgc ttctgaaaat tgcattttt taccattca aactatTTT 3600  
taaaaataaa tacagttaac atagagtgtt ttcttcattc atgtgaaaat 3650  
tattagccag caccagatgc atgagcta atotctttg agtccttgct 3700  
tctgtttgct cacagtaaac tcattgtta aaagcttcaa gaacattcaa 3750  
gctgttggtg tgTTAAAAAA tgcattgtat tgattgtac tggttagttta 3800  
tgaaatttaa ttAAAACACA ggccatgaat ggaagggtgg attgcacagc 3850  
taataaaaata tgattgtgg atatgaa 3877

<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					25				30	
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
			35					40				45		
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50				55				60		
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
			65					70				75		
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80				85				90		

Glu Gln Leu Arg Asn Gly Gln Tyr Gln Ala Ser Asp Ala Ala Gly  
 95 100 105  
 Leu Gly Leu Asp Arg Ser Pro Pro Glu Lys Thr Gln Ala Asp Leu  
 110 115 120  
 Leu Ala Phe Leu His Ser Gln Val Asp Lys Ala Glu Val Asn Ala  
 125 130 135  
 Gly Val Lys Leu Ala Thr Glu Tyr Ala Ala Val Pro Phe Asp Ser  
 140 145 150  
 Phe Thr Leu Gln Lys Val Tyr Gln Leu Glu Thr Gly Leu Thr Arg  
 155 160 165  
 His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys Arg Asp Glu Leu  
 170 175 180  
 Val Glu Ala Ile Glu Ser Ala Leu Glu Thr Leu Asn Asn Pro Ala  
 185 190 195  
 Glu Asn Ser Pro Asn His Arg Pro Tyr Thr Ala Ser Asp Phe Ile  
 200 205 210  
 Glu Gly Ile Tyr Arg Thr Glu Arg Asp Lys Gly Thr Leu Tyr Glu  
 215 220 225  
 Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile  
 230 235 240  
 Leu Phe Arg Pro Phe Ser Pro Ile Met Lys Val Lys Asn Glu Lys  
 245 250 255  
 Leu Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala  
 260 265 270  
 Lys Arg Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu  
 275 280 285  
 Met Cys Ile Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr  
 290 295 300  
 Phe Gly Lys Glu Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn  
 305 310 315  
 Thr Ser Lys Ala Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu  
 320 325 330  
 Asn Gly Glu Phe Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg  
 335 340 345  
 Phe Trp Lys Gly Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp  
 350 355 360  
 Ile Tyr Phe Thr Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr  
 365 370 375  
 Gln Pro Gly Lys Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr  
 380 385 390  
 Asn Pro Gly Ile Ile Tyr Gly His His Asp Ala Val Pro Pro Leu  
 395 400 405

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcgaaaa gggacttcat gttgg 25

<210> 383

<211> 20  
<212> DNU

<212> DNA

### **<Z13> Artificial sequence**

gcgaagg

<211> 19

<212> DN

<213> Art

<223>

1100-384

cagcctac

<210> 385

<211> 48  
<212> DNA

<212> DN

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtagc aatccctggca taatatacgg ccaccatgtat gcagtcccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct ctttttctg gtgactgccat ttcatgctga 50

actctgtcaa ccaggtgcag aaaatgcttt taaagtgaga cttagtatca 100

gaacagctct gggagataaa gcataatgcct gggataccaa tgaagaatac 150

ctcttcaaag cgatggtagc tttctccatg agaaaagttc ccaacagaga 200

agcaacagaa atttcccatg tcctactttt caatgttaacc cagagggtat 250

cattctggtt tgtggttaca gacccttcaa aaaatcacac ctttcctgct 300

gttgaggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350

cttctttcta aatgacccaa ctctggaaatt tttaaaaatc cttccacac 400

ttgcaccacc catggaccctc tctgtgccat tctggattat tatatttgg 450

gtgatatttt gcatcatcat agttgcattt gcactactga ttttatcagg 500

gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550

ctgaagataa gtgtgaaaac atgatcacaat ttgaaaatgg catcccctct 600

gatcccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650

gatgagaggg tcacccctct ctgaaggct gttgttctgc ttccctcaaga 700

aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750

gcagatcata tattttgttt caccattctt cttttgtat aaattttgaa 800

tgtgctgaa agtggaaagc aatcaattat acccaccaac accactgaaa 850

tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900

tagtgtataa atgtggcat gtggattttt tagttatttga tttaaggatt 950

tttagaaata agatcaggca tatgtatata tttcacact tcaaagacct 1000

aaggaaaaat aaattttcca gtggagaata catataatat ggtgtgaaaa 1050

tcattgaaaa tggatccctt ttgacgatca cttatatcac tctgtatatg 1100

actaagtaaa caaaagttag aagtaattat tgtaaatggaa tggataaaaa 1150

tggaaattact catatacagg gtggaaattttt atcctgttat cacaccaaca 1200

gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaaagtcc aatcttgct aacttaataa 1300  
agtaataatc atctttttt aaaaaaaaaa aaaaaaaaaa aaaaaaa 1346

<210> 387  
<211> 212  
<212> PRT  
<213> Homo sapiens

<400> 387  
Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu  
1 5 10 15  
Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser  
20 25 30  
Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn  
35 40 45  
Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys  
50 55 60  
Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys  
65 70 75  
Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro  
80 85 90  
Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile  
95 100 105  
Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp  
110 115 120  
Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
125 130 135  
Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
140 145 150  
Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
155 160 165  
Ile Trp Gln Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
170 175 180  
Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
185 190 195  
Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met  
200 205 210  
Pro Ser

<210> 388  
<211> 1371  
<212> DNA  
<213> Homo sapiens

<400> 388  
aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctccggagt 50

ggccttggca gggtgttgg a gccctcggtc tgccccgtcc ggtctctggg 100  
gccaaggctg gttttccctc atgtatggca agagctctac tcgtgcggtg 150  
cttcttctcc ttggcataca gtcacagct ctttggccta tagcagctgt 200  
ggaaatttat acctcccggg tgctggaggc tgtaatggg acagatgctc 250  
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aatcaaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750  
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gaacaagaac cctagtattt cttgaagtta atggaaactt ttctttggct 850  
tttccagtg tgacccgttt tccaaccagt tctgcagcat attagattct 900  
agacaagcaa caccctctg gagccagcac agtgcgcctc catatcacca 950  
gtcatacaca gcctcattat taaggtctta tttaatttca gagtgttaat 1000  
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ttaagacact acttacagtg ttatgacttg tatacacata tattggtatac 1100  
aaaggggata aaagccaatt tgtctgttac atttccttcc acgtatttct 1150  
tttagcagca cttctgctac taaagttaat gtgtttactc tctttccctc 1200  
ccacattctc aattaaaagg tgagctaagc ctcctcggtg tttctgatta 1250  
acagtaaattc ctaaattcaa actgttaat gacatttttta tttttatgtc 1300  
tctccttaac tatgagacac atcttggttt actgaatttc tttcaatatt 1350  
ccaggtgata gattttgtc g 1371

<210> 389  
<211> 215  
<212> PRT  
<213> Homo sapiens

<400> 389  
Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly  
1 5 10 15

Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr  
 20 25 30  
 Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu  
 35 40 45  
 Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr  
 50 55 60  
 Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe  
 65 70 75  
 Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg  
 80 85 90  
 Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp  
 95 100 105  
 Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr  
 110 115 120  
 Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile  
 125 130 135  
 Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu  
 140 145 150  
 Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met  
 155 160 165  
 Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys  
 170 175 180  
 Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser  
 185 190 195  
 Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr  
 200 205 210  
 Leu Glu Asp Thr Asp  
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<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gagc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagc 24

DRAFT GENOME SEQUENCES

<210> 392  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 392  
gagaggactg cgggagtttg ggaccttgt gcagacgtgc tcatg 45

<210> 393  
<211> 471  
<212> DNA  
<213> Homo sapiens

<400> 393  
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agcagtccctg gtactcttgg gagttccat ctttctggc tctgccaga 100  
atccgacaac agctgctcca gctgacacgt atccagctac tggcctgct 150  
gatgatgaag cccctgatgc taaaaccact gctgctgcaa ccactgcgac 200  
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
aagacattcc agtttaccc aaatgggtt gggatctccc gaatggtaga 300  
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
tattcatgct tcctgtgatt tcatccaact acttaccttgc cctacgatat 400  
cccctttatac tctaattcagt ttattttctt tcaaataaaa aataactatg 450  
agcaacataa aaaaaaaaaa a 471

<210> 394  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 394  
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe  
1 5 10 15  
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
20 25 30  
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
35 40 45  
Thr Thr Ala Ala Ala Thr Thr Ala Thr Ala Ala Pro Thr Thr  
50 55 60  
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
65 70 75  
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
80 85 90

<210> 395  
<211> 25

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 395  
gctccctgat cttcatgtca ccacc 25

<210> 396  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 396  
cagggacaca ctctaccatt cgggag 26

<210> 397  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 397  
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398  
<211> 907  
<212> DNA  
<213> Homo sapiens

<400> 398  
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ggcaggacc ccatagggga atgctaccc tcgtcccttc acctgcccctg 150  
gtgttcacgg tggcttggtc cttcttgcc gagagagtgt cttgggtcag 200  
ggacgcagag gacgctcaca gactccagcc ctttggtaacc gagaggacac 250  
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300  
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agagggtctt 350  
ggccagtcca ggggggggggg cggcaaactc cataaagaac cagagggtct 400  
ggggccccggc cacagagtca tctgcccagg tcctctgctg ctggccagtg 450  
ggagtggcac gaggtggggc tttgtgcag taaaaccaca ggctggattt 500  
gcctgcgggc catggccct gtctaggcga gcaattctca accttctgc 550  
tctcaggacc ccaaagagct ttcattgtat ctattgatt ttaccacatt 600  
agcaattaaa actgagaaat gggccggcga cggtggctca cgcctgtaat 650

cccagcactt tgggaggccg aggccccgtgg atcacctgag atcaggagtt 700  
caagaccgc ctggccaaca tggtaaaacc ttgtctacta aaaataaaaa 750  
aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
gctgaggcag gaaaatcgct tgaacccagg aggcggacgt tgcggtgagc 850  
cgagatcgcg ccgctgattc cagcctggc gacaagagtg agactccatc 900  
tcacaca 907

<210> 399

<211> 120

<212> PRT

<213> Homo sapiens

<400> 399

Met	Leu	Pro	Pro	Ala	Leu	Pro	Pro	Ala	Leu	Val	Phe	Thr	Val	Ala
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Trp	Ser	Leu	Leu	Ala	Glu	Arg	Val	Ser	Trp	Val	Arg	Asp	Ala	Glu
					20				25					30
Asp	Ala	His	Arg	Leu	Gln	Pro	Phe	Val	Thr	Glu	Arg	Thr	Leu	Gly
				35					40					45
Lys	Val	Gln	Arg	Trp	Ser	Gly	Val	His	Thr	Gln	Thr	Gly	Gly	Arg
				50				55						60
Ala	Gly	Gly	Gly	Gln	Phe	Cys	Cys	Ala	Trp	Leu	Asp	Ser	Lys	Arg
				65				70						75
Val	Leu	Ala	Ser	Pro	Gly	Trp	Gly	Ala	Ala	Asn	Ser	Ile	Lys	Asn
				80				85						90
Gln	Arg	Val	Trp	Ala	Pro	Ala	Thr	Glu	Ser	Ser	Ala	Gln	Leu	Leu
				95				100						105
Cys	Cys	Trp	Pro	Val	Gly	Val	Ala	Arg	Gly	Gly	Ala	Leu	Cys	Gln
				110				115						120

<210> 400

<211> 893

<212> DNA

<213> Homo sapiens

<400> 400

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ccggcctgcc tcagcggccc ccatggcg ggccagaactg gcacagcatg 100  
aggagctgac cctgctttc catggaccc tgcagctggg ccaggccctc 150  
aacgggtgtt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200  
cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
ggggccggga tgcagccag gaacttcggg caagcctgtt ggagactcag 300  
atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350  
gggggaggtg gcccaggcac agaagggtgct acgggacacg gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450  
gaggtcttaa aggctcacgc tgacaaggcag agccacatcc tatgggcct 500  
cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
ggctgogaca gatccaggag agactccaca cagcggcgct cccagcctga 600  
atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650  
cgccccgtga ggcccctgtg cagggaggag ctgcctgttc actgggatca 700  
gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750  
cggggacaaa ggcagaggat gtagccccat tggggagggg tggaggaagg 800  
acatgtaccc tttcatgcct acacaccct cattaaagca gagtcgtggc 850  
atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val
1				5					10				15	
Thr	Arg	Pro	Ala	Ser	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu	Ala
					20				25				30	
Gln	His	Glu	Glu	Leu	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln	Leu
				35					40				45	
Gly	Gln	Ala	Leu	Asn	Gly	Val	Tyr	Arg	Thr	Thr	Glu	Gly	Arg	Leu
				50				55					60	
Thr	Lys	Ala	Arg	Asn	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile	Glu
					65				70				75	
Leu	Leu	Gly	Gln	Glu	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln	Glu
				80				85					90	
Leu	Arg	Ala	Ser	Leu	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile	Leu
				95					100				105	
Gln	Leu	Gln	Ala	Glu	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val	Ala
				110				115					120	
Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125				130					135	
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140				145					150	
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155				160					165	
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170				175					180	
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala

185

190

195

Leu Pro Ala

<210> 402  
<211> 1915  
<212> DNA  
<213> Homo sapiens

<400> 402  
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tgttaattgc atccctggta tcacccttact cctggaccag accaccagcc 100  
acacatccag attaaaagcc aggaaggcaca gcaaacgtcg agtgagagac 150  
aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200  
tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250  
aagttcacaa gaaatgctac cttgcttcag aaggttgaa gcatttccat 300  
gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatcccag 350  
gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400  
caggtgtcaa tgactttgg ctgggcatca atgacatggt cacggaaggc 450  
aagtttgttgc acgtcaacgg aatcgctatc tccttcctca actgggaccg 500  
tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600  
atatgcgagt tcaccatccc taaataggta tttctccat gtgtcctcca 650  
agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750  
agcaatatga tagcatcagc caatttgtt aacacatttc tttgggattt 800  
tgcccttcct ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850  
gataaaatgg cttctgctaa acagactaaa atctttctct ctgtcttc 900  
tcacttgcacaa aaacccagtt tgtttcaaa aaatcacagt agcaatgcaa 950  
ctcatcactc tagaaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
gaagtttagc gtatgttgc ctaacaaaaa ttccctacat cagagactct 1050  
agggtgctata taatccaaaa actttcagc ctgttgctca ttctgtccca 1100  
tgctggcaat aataccttgt cagcccatta cccttatttt gaattgctcc 1150  
atctcctggt gggacttgta tcttgcgtgc catatcagaa cacaaacccc 1200  
tgaagaggtt ctgatttgat tttttttt tcttcatgcc taccctttt 1250  
ttgaaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttgc 1300

atcaatttc attcccacca ttgcattaca acctctaact taaatggta 1350  
accctaagc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400  
aaaagaacct acatttattt tgcttagca tccttactct cacctttat 1450  
gagattgaga gtggacttac attcccttt ttacatttc gtatattat 1500  
tttttttagc catcattata tgttaagtc tattatggc aaccaatctt 1550  
tggaagctga aaactgaatt taaagaatgc tatcttgaa aattgcatac 1600  
gtctgtgcaa ttttttattc tgcctagtgc tattctgctt gtttaactag 1650  
attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700  
tggagggaaa tgggctttt agaagcaaac aattttaaat atatttgtt 1750  
cttcaaataa atagtgtta aacattgaat gtgtttgtg aacaatatcc 1800  
cactttgcaa actttaacta cacatgcttgaat aacaaatcc 1850  
tcattgctca ataataaaagc ctgaattctg atcaataaaaa aaaaaaaaaa 1900  
aaaaaaaaaaa aaaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
1					5				10					15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr
					20				25					30
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
					35				40					45
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu
					50				55					60
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr
					65				70					75
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala
					80				85					90
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile
					95				100					105
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile
					110				115					120
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn
					125				130					135
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe
					140				145					150
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg

155                    160                    165

Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser  
170                    175                    180

Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser  
185                    190                    195

Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys  
200                    205

<210> 404  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 404  
cctggttatc cccaggaact ccgac 25

<210> 405  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 405  
ctcttgctgc tgcgacaggc ctc 23

<210> 406  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 406  
cgccctccaa gactatggta aaaggaggct gccaggtgtc aatgac 46

<210> 407  
<211> 570  
<212> DNA  
<213> Homo sapiens

<400> 407  
gcgaggaccg ggtataagaa gcctcggtgc cttgccccgg cagccgcagg 50  
ttccccgggc gccccgagcc cccgcgcatt gaagctcgcc gccctcctgg 100  
ggctctgggtt ggccctgtcc tgcagctccg ctgtgtcttt ctttgtggc 150  
tcggccaagc ctgtggccca gcctgtcgct gcgtggagt cggcggcgg 200  
ggccggggcc gggaccctgg ccaacccctt cggcaccctc aaccgcgtga 250  
agctcctgtct gagcagcctg ggcattccccg tgaaccacct catagaggc 300  
tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgttgcc tgagccgaga 400  
ctggaggcata tacacctgag gacaagacgc tgcccaccccg cgagggctga 450  
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ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
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Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
					20				25				30	
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
					35				40				45	
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
					50				55				60	
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
					65				70				75	
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val
					80				85				90	
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly	
					95				100					

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggcctt 150  
ggcccccagt cctcagtcgc cagagacccc agccctcag aaccagacca 200  
gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
agcggaggaga aggccggta ggaagagaaa gcctggctga tggccagcag 300  
gcagcagctt gccaaggaga cttcaaactt cggattcagc ctgctgcgaa 350  
agatctccat gaggcacatgg tcttctctcc atttggcatg 400  
tccttggcca tgacaggctt gatgctgggg gccacaggcc cgactgaaac 450  
ccagatcaag agagggtcc acttgcagcc cctgaagccc accaagcccg 500

ggctcctgcc ttccctctt aaggactca gagagaccct ctcggcaac 550  
ctggaaactgg gcctctaca ggggagttt gccttcatcc acaaggattt 600  
tgatgtcaaa gagactttct tcaatttatac caagaggtat tttgatacag 650  
agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700  
aatcattaca ttaacaaaga gactcgaaaaaaaattccca aactgttga 750  
tgagattaat cctgaaacca aattaattct tgtggattac atcttgtca 800  
aaggaaatg gttgacccca tttgaccctg tcttcaccga agtcgacact 850  
ttccacctgg acaagtacaa gaccattaag gtgcccattga tgtacggtgc 900  
aggcaagttt gcctccaccc ttgacaagaa ttttcgttgt catgtcctca 950  
aactgccccta ccaaggaaat gccaccatgc tggtggtcct catggagaaa 1000  
atgggtgacc acctcgccct tgaagactac ctgaccacag acttggtgga 1050  
gacatggctc agaaacatga aaaccagaaa catggaagtt ttcttcgcga 1100  
agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150  
ggaatcagaa gaatcttctc accctttgtc gacccatgt aactctcagc 1200  
tactggaaga aatctccaag tatccaggtt tttacgaaga acagtgattt 1250  
aagttgatga aaggggact gaggcagtgg caggaatctt gtcagaaattt 1300  
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cccagcagat gcctgaaacg gtggacagtgc ctgaacccctt tatatatattt 1650  
ttcctacaca tacataccta tgataaagtt taatttataa attaggcaca 1700  
gtaagagattt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750  
gcaaggactg caataccata acagtcaaac tgattataga gaaggctact 1800  
aagtgactca tggcgagga gcatagacag tgtggagaca ttgggcaagg 1850  
ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900  
cccactactc agaatggcat gctgcttaag acttttagat tggttatcc 1950  
tggaaatttt catttaatgt ttttggacca tggttgacca tggtaactg 2000  
agactgcaga aagcaaaacc atggataagg gaggactact acaaaaagcat 2050  
taaattgata catatTTTTT aaaaaaaaaaaaaaaa 2089

<210> 410  
<211> 444  
<212> PRT  
<213> Homo sapiens

<400> 410  
Met Lys Val Val Pro Ser Leu Leu Leu Ser Val Leu Leu Ala Gln  
1 5 10 15  
Val Trp Leu Val Pro Gly Leu Ala Pro Ser Pro Gln Ser Pro Glu  
20 25 30  
Thr Pro Ala Pro Gln Asn Gln Thr Ser Arg Val Val Gln Ala Pro  
35 40 45  
Arg Glu Glu Glu Glu Asp Glu Gln Glu Ala Ser Glu Glu Lys Ala  
50 55 60  
Gly Glu Glu Glu Lys Ala Trp Leu Met Ala Ser Arg Gln Gln Leu  
65 70 75  
Ala Lys Glu Thr Ser Asn Phe Gly Phe Ser Leu Leu Arg Lys Ile  
80 85 90  
Ser Met Arg His Asp Gly Asn Met Val Phe Ser Pro Phe Gly Met  
95 100 105  
Ser Leu Ala Met Thr Gly Leu Met Leu Gly Ala Thr Gly Pro Thr  
110 115 120  
Glu Thr Gln Ile Lys Arg Gly Leu His Leu Gln Ala Leu Lys Pro  
125 130 135  
Thr Lys Pro Gly Leu Leu Pro Ser Leu Phe Lys Gly Leu Arg Glu  
140 145 150  
Thr Leu Ser Arg Asn Leu Glu Leu Gly Leu Ser Gln Gly Ser Phe  
155 160 165  
Ala Phe Ile His Lys Asp Phe Asp Val Lys Glu Thr Phe Phe Asn  
170 175 180  
Leu Ser Lys Arg Tyr Phe Asp Thr Glu Cys Val Pro Met Asn Phe  
185 190 195  
Arg Asn Ala Ser Gln Ala Lys Arg Leu Met Asn His Tyr Ile Asn  
200 205 210  
Lys Glu Thr Arg Gly Lys Ile Pro Lys Leu Phe Asp Glu Ile Asn  
215 220 225  
Pro Glu Thr Lys Leu Ile Leu Val Asp Tyr Ile Leu Phe Lys Gly  
230 235 240  
Lys Trp Leu Thr Pro Phe Asp Pro Val Phe Thr Glu Val Asp Thr  
245 250 255  
Phe His Leu Asp Lys Tyr Lys Thr Ile Lys Val Pro Met Met Tyr  
260 265 270  
Gly Ala Gly Lys Phe Ala Ser Thr Phe Asp Lys Asn Phe Arg Cys  
275 280 285

His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val
				290				295					300	
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr
		305						310					315	
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr
		320						325					330	
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys
		335						340					345	
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile
		350						355					360	
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg
		365						370					375	
Asn	Leu	Gln	Val	Ser	Arg	Val	Leu	Arg	Arg	Thr	Val	Ile	Glu	Val
		380						385					390	
Asp	Glu	Arg	Gly	Thr	Glu	Ala	Val	Ala	Gly	Ile	Leu	Ser	Glu	Ile
		395						400					405	
Thr	Ala	Tyr	Ser	Met	Pro	Pro	Val	Ile	Lys	Val	Asp	Arg	Pro	Phe
		410						415					420	
His	Phe	Met	Ile	Tyr	Glu	Glu	Thr	Ser	Gly	Met	Leu	Leu	Phe	Leu
		425						430					435	
Gly	Arg	Val	Val	Asn	Pro	Thr	Leu	Leu						
		440												

<210> 411  
<211> 636  
<212> DNA  
<213> Homo sapiens

<400> 411  
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cccagacatg aggaggctcc tcctggtcac cagcctggtg gttgtgctgc 100  
tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
gtcaaacact ggcctcaga gcaggaccca gagaaggcct gggcgcccc 200  
tgtggtggag cctccggaga aggacgacca gctggtggtg ctgtccctg 250  
tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
aggggccccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350  
cctggccgt gtcctgagtc ccgagccga ccatgacagc ctgtaccacc 400  
ctccgcctga ggaggaccag ggcgaggaga ggccccgggt gtgggtgatg 450  
ccaaatcacc aggtgctctt gggaccggag gaagaccaag accacatcta 500  
ccaccccccag tagggttcca ggggccatca ctgccccgc cctgtcccaa 550  
ggcccgaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaaccggc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu  
1 5 10 15

Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met  
20 25 30

Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp  
35 40 45

Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val  
50 55 60

Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu  
65 70 75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys  
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro  
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp  
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln  
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro  
140 145 150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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aggagactctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgttc tcatacgac caccagagga 150

tggagttacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200

gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgtttatctac 300

cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctgggtggc 350

cagcgtgcat gagaatgaca tgcgtggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450  
tggccaact acaacacctt tggatctgca gaggcggca cgagcgatga 500  
ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatact 550  
ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
ctgaggtacc gcacggacac tggtttcctc cagacactgg gacataatct 650  
gtttggcatc taccagaaat atccagtcaa atatggagaa ggaaagtgtt 700  
ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750  
cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800  
gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850  
tgtgtgctgg aatgagggtc accggatgta acactgagca tcactgcatt 900  
ggtggaggag gatacttcc agaggccagt ccccagcagt gtggagattt 950  
ttctggttt gattggagtg gatatggaac tcatgttggt tacagcagca 1000  
gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
tgtggaggaa aaccragacc tctcctccca accatgagat cccaaggatg 1100  
gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150  
taaatcatat tgactcaaga aaaaaa 1176

<210> 414  
<211> 313  
<212> PRT  
<213> Homo sapiens

<400> 414  
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1 5 10 15  
Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr  
20 25 30  
Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys  
35 40 45  
Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr  
50 55 60  
Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly  
65 70 75  
Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met  
80 85 90  
Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly  
95 100 105  
Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr  
110 115 120  
Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala Lys Asp Leu Gly Ile Trp 140	145	150
His Val Pro Asn Lys Ser Pro Met Gln His Trp Arg Asn Ser Ser 155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly Phe Leu Gln Thr Leu Gly 170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Gly 185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly Pro Val Ile Pro Val Val 200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr Ala Ser Tyr Tyr Ser Pro 215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly Phe Val Gln Phe Arg Val 230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala Leu Cys Ala Gly Met Arg 245	250	255
Val Thr Gly Cys Asn Thr Glu His His Cys Ile Gly Gly Gly Gly 260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln Cys Gly Asp Phe Ser Gly 275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His Val Gly Tyr Ser Ser Ser 290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu Leu Phe Tyr Arg 305	310	

<210> 415  
<211> 1281  
<212> DNA  
<213> Homo sapiens

<400> 415  
gccccggccgg cgcggcgtgc gcagaggagc cgctctcgcc gcccacacct 50  
cggctgggag cccacgaggc tgccgcattcc tgcctcgga acaatggac 100  
tcggcgccgc aggtgcttgg gccgcgtgc tcctgggac gctgcaggta 150  
ctagcgctgc tggggccgc ccatgaaagc gcagccatgg cggcatctgc 200  
aaacatagag aattctggc ttccacacaa ctccagtgtc aactcaacag 250  
agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300  
actgtgaaac caccacacttc agttgcctca gactccagta atacaacggt 350  
caccaccaatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400  
tctcaacaaa tatgacttct accacctaa agtctacacc caaaacaaca 450  
agtgtttcac agaacacatc tcagatatac acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550  
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagctt 600  
 gttggtggtt ttgttattaac gctgggagtt ttatctattc tttacattgg 650  
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700  
 aacatgatgc catcattaa ggaaatccat ggaccaagga tggaatacag 750  
 attgatgctg ccctatcaat taatttttgtt ttattaatag tttaaaacaa 800  
 tattctctt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850  
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
 tgaaataaac atctggatct tatagaccgt tcatacaatg gtttagcaa 950  
 gttcatagta agacaaacaa gtcctatctt tttttttgg ctgggggtgg 1000  
 ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050  
 agaatgcccatttggcataaaataagaag tttgtcacag cactcaggat 1100  
 tttgggtatc tttttagct cacataaaga acttcagtgc ttttcagagc 1150  
 tggatatac ttaattacta atgccacaca gaaattatac aatcaaacta 1200  
 gatctgaagc ataatttaag aaaaacatca acatfffftg tgcttaaac 1250  
 tgttagtagtt ggtctagaaa caaaatactc c 1281

&lt;210&gt; 416

&lt;211&gt; 208

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
1														15

Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
														30
20														

Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
														45
35														

Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
														60
50														

Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
														75
65														

Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys
														90
80														

Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr
														105
95														

Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser
														120
110														

Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile		
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp		
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu		
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly		
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile		
200	205	

<210> 417  
<211> 1728  
<212> DNA  
<213> Homo sapiens

<400> 417  
cagccgggtc ccaaggctgt gcctgagocct gaggctgagc ctgagccccga 50  
gccgggagcc ggtcgccgggg gctccgggtt gtgggaccgc tggggcccca 100  
gcgtatggcga ccctgtgggg aggccttctt cggcttggct ctttgctcag 150  
cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgccag ctgtcagacg 200  
ccgccaagaa tttcgaggat gtcagatgta aatgtatctg ccctccctat 250  
aaagaaaaatt ctggcatat ttataataag aacatatctc agaaagattt 300  
tgattgcctt catgttgtgg agccatgcc tgtgcggggg cctgatgttag 350  
aagcatactg tctacgctgt gaatgcaaattt atgaagaaag aagctctgtc 400  
acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450  
tctgtacatg gtatatctta ctctgggttga gcccatactg aagaggcgcc 500  
tctttggaca tgcacagttt atacagagtgt atgatgatattt tggggatcac 550  
cagccttttg caaatgcaca cgatgtgcta gcccgtccc gcagtcgagc 600  
caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650  
tccaagagca gcgaaagtct gtctttgacc ggcattttgtt cctcagctaa 700  
ttgggaattt aattcaaggt gactagaaag aaacaggcag acaactggaa 750  
agaactgact gggttttgtt gggttttcatt ttaatacctt gttgatttca 800  
ccaactgttg ctgaaagatt caaaaacttgg aagaaaaact tgcttggattt 850  
tttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900  
aaagtcaagcc aataagtctt ttccttatttgc tgacttttac taataaaaaat 950  
aatctgcctt gtaaatttac ttgaagtcct ttacctggaa caagcactct 1000

cttttcacc acatagttt aacttgactt tcaagataat ttccagggtt 1050  
tttgggttg ttgtttttg tttgtttgtt ttgggtggag aggggaggg 1100  
tgcctggaa gtggtaaca actttttca agtcactta ctaaacaaac 1150  
ttttgtaaat agaccttacc ttctatttc gagttcatt tatatttgc 1200  
agtgttagcca gcctcatcaa agagctgact tactcatttgc 1250  
tgactgtatt atctgggtat ctgctgtgtc tgcaacttcat ggttaacggg 1300  
atctaaaatg cctgggtggct tttcacaaaaa agcagattt cttcatgtac 1350  
tgtgatgtct gatgaatgc atcctagaac aaactggcca tttgctagtt 1400  
tactctaaag actaaacata gtcttgggt gtgtggtctt actcatctc 1450  
tagtacctt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
attttatttt aaacccaagc ctccctggat tgataatata tacacatttgc 1550  
tcagcatttc cggtcggtggt gagaggcagc tggttagctt ccaatatgtc 1600  
cagcttggaa ctagggctgg gggtgtgggt gcctcttctg aaaggctaa 1650  
ccattattgg ataactggct ttttcttcc tatgtcctct ttggaatgta 1700  
acaataaaaaa taattttga aacatcaa 1728

<210> 418  
<211> 198  
<212> PRT  
<213> Homo sapiens

<400> 418  
Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu  
1 5 10 15  
Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu  
20 25 30  
Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile  
35 40 45  
Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn  
50 55 60  
Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met  
65 70 75  
Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu  
80 85 90  
Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile  
95 100 105  
Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val  
110 115 120  
Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly  
125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln  
140 145 150  
Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg  
155 160 165  
Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys  
170 175 180  
Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val  
185 190 195  
Val Leu Ser

<210> 419  
<211> 681  
<212> DNA  
<213> Homo sapiens

<400> 419  
gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50  
tcgctctggc ttctgggctt gtcctggctc tgcgtcgct gctgccccaaag 100  
gccttcctgt cccgcggaa gcggcaggag ccgcgcgcga cacctgaagg 150  
aaaattgggc cgatttccac ctatgatgca tcatacaccag gcaccctcag 200  
atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250  
tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggttagtgg 300  
aagaggtctg atggggcaga ttattccaat ctacggttt gggatttttt 350  
tatataatact gtacattcta tttaaggtaa gtagaatcat cctaatcata 400  
ttacatcaat gaaaatctaa tatggcgata aaaatcattt tctacattaa 450  
aacttcttat agttcataaaa attatttcaa atccatcatc tctttaaatc 500  
ctgcctcctc ttcatgaggt acttaggata gccattattt cagtttcaca 550  
taagaatgt tactcaatgt ttaagtgtt tgccccaaaa ttccacaacta 600  
acaaggcaga actaggactt gaacatggat ctttggttc ttaatccagt 650  
gagtgataca attcaatgca ctcccctgcc a 681

<210> 420  
<211> 128  
<212> PRT  
<213> Homo sapiens

<400> 420  
Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu  
1 5 10 15  
Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
20 25 30  
Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
35 40 45

Arg Phe Pro Pro Met Met His His Gln Ala Pro Ser Asp Gly  
50 55 60  
Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala  
65 70 75  
Phe Ala Lys Ala Lys Gly Ser Gly Gly Ala Gly Gly Gly  
80 85 90  
Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe  
95 100 105  
Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg  
110 115 120  
Ile Ile Leu Ile Ile Leu His Gln  
125

<210> 421  
<211> 1630  
<212> DNA  
<213> Homo sapiens

<400> 421  
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gctttcatc ttggatttga aagttgagag cagcatgtt tgccactga 100  
aactcatcct gtcgcaggatg ttactggatt attccttggg cctgaatgac 150  
ttgaatgtt cccgcctga gctaacagtc catgtgggtg attcagctct 200  
gatggatgtt gttttccaga gcacagaaga caaatgtata ttcaagatag 250  
actggactct gtcaccagga gagcacgoca aggacgaata tgtgctatac 300  
tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350  
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400  
tgcaagagggc tgaccaggaa acctatatct gtgaaatccg cctcaaagg 450  
gagagccagg tgttcaagaa ggcgggtgtc ctgcattgtgc ttccagagga 500  
gcccaaagag ctcatggtcc atgtgggtgg attgatttagt atggatgtg 550  
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600  
tcaggacggc ggcacaaagga ggagattgtt tttcggtact accacaaact 650  
caggatgtct gtggagtact cccagagctg gggccacttc cagaatcg 700  
tgaacctggt gggggacatt ttccgcaatg acgggtccat catgcttcaa 750  
ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800  
gaacctggtg ttcaagaaaa ccattgtgtc gcatgtcagc ccggaagagc 850  
ctcgaacact ggtgaccccg gcagccctga ggcctctggc cttgggtgg 900  
aatcagttgg tgatcattgtt gggattgtc tgcacacaa tcctgctgtc 950  
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttggc aagaacaoga agaagactaa tccagagata 1050  
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100  
ctccccata attgtacggg aggtgatcga ggaagaagaa ccaagtgaaa 1150  
aatcagaggc cacctacatg accatgcacc cagttggcc ttctctgagg 1200  
tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250  
aacacagcaa gccttttag aagaatggag agtcccttca tctcagcagc 1300  
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350  
agactcccgc tctcccagct gtcctcctgt ctcattgttt ggtcaataca 1400  
ctgaagatgg agaatttggc gcctggcaga gagactggac agctctggag 1450  
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500  
acactggccc tggaaaccag gctgagctga gtggcctcaa acccccccgtt 1550  
ggatcagacc ctccctgtgg cagggttctt agtggatgag ttactggaa 1600  
gaatcagaga taaaaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Ile	Pro	Val	Leu	Leu	Asp
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Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu
				20				25						30
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln
				35				40						45
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser
				50				55						60
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser
	65							70						75
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu
				80				85						90
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp
				95				100						105
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu
				110				115						120
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val
				125				130						135
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu
				140				145						150
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val

155	160	165
Thr Lys Val Glu Trp Ile Phe Ser Gly Arg Arg Ala Lys Glu Glu		
170	175	180
Ile Val Phe Arg Tyr Tyr His Lys Leu Arg Met Ser Val Glu Tyr		
185	190	195
Ser Gln Ser Trp Gly His Phe Gln Asn Arg Val Asn Leu Val Gly		
200	205	210
Asp Ile Phe Arg Asn Asp Gly Ser Ile Met Leu Gln Gly Val Arg		
215	220	225
Glu Ser Asp Gly Gly Asn Tyr Thr Cys Ser Ile His Leu Gly Asn		
230	235	240
Leu Val Phe Lys Lys Thr Ile Val Leu His Val Ser Pro Glu Glu		
245	250	255
Pro Arg Thr Leu Val Thr Pro Ala Ala Leu Arg Pro Leu Val Leu		
260	265	270
Gly Gly Asn Gln Leu Val Ile Ile Val Gly Ile Val Cys Ala Thr		
275	280	285
Ile Leu Leu Leu Pro Val Leu Ile Leu Ile Val Lys Lys Thr Cys		
290	295	300
Gly Asn Lys Ser Ser Val Asn Ser Thr Val Leu Val Lys Asn Thr		
305	310	315
Lys Lys Thr Asn Pro Glu Ile Lys Glu Lys Pro Cys His Phe Glu		
320	325	330
Arg Cys Glu Gly Glu Lys His Ile Tyr Ser Pro Ile Ile Val Arg		
335	340	345
Glu Val Ile Glu Glu Glu Glu Pro Ser Glu Lys Ser Glu Ala Thr		
350	355	360
Tyr Met Thr Met His Pro Val Trp Pro Ser Leu Arg Ser Asp Arg		
365	370	375
Asn Asn Ser Leu Glu Lys Lys Ser Gly Gly Met Pro Lys Thr		
380	385	390
Gln Gln Ala Phe		

<210> 423  
 <211> 963  
 <212> DNA  
 <213> Homo sapiens

<400> 423  
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50  
 ccatctcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100  
 agatactgaa attgttaagag ttggaaaacta catttgcaa agtcattgaa 150  
 ctctgagctc agttgcagta ctcggaaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcgaaac cagctctgt ctccgttggc 250  
cctgcacccct cctcctggtg gcgtgtgatg gctttgattc tgctgatccct 300  
gtgcgtgggg atgggtgtcg ggctggtggc tctggggatt tggtctgtca 350  
tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400  
caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450  
aaaggcact ttcaaaggcataaaatgcag cccctgtgac acaaactgga 500  
gatattatgg agatagctgc tatgggttct tcagggacaa cttaacatgg 550  
gaagagagta agcagtactg cactgacatg aatgctactc tootgaagat 600  
tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650  
gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtggag 700  
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aggaaatatg aatttgtcattt atttcataa tggaaaaatg caccctacct 800  
tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850  
aaggtggacc aactaccta atgcaaagag gtggacagga taacacagat 900  
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<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

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Arg	Val	Met	Ala	Leu	Ile	Leu	Ile	Leu	Cys	Val	Gly	Met	Val	
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Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
				50					55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
								65	70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
								80	85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
				95					100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
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Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

125                    130                    135  
Thr Leu Leu Lys Ile Asp Asn Arg Asn Ile Val Glu Tyr Ile Lys  
140                    145                    150  
Ala Arg Thr His Leu Ile Arg Trp Val Gly Leu Ser Arg Gln Lys  
155                    160                    165  
Ser Asn Glu Val Trp Lys Trp Glu Asp Gly Ser Val Ile Ser Glu  
170                    175                    180  
Asn Met Phe Glu Phe Leu Glu Asp Gly Lys Gly Asn Met Asn Cys  
185                    190                    195  
Ala Tyr Phe His Asn Gly Lys Met His Pro Thr Phe Cys Glu Asn  
200                    205                    210  
Lys His Tyr Leu Met Cys Glu Arg Lys Ala Gly Met Thr Lys Val  
215                    220                    225  
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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 425

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<210> 426

<211> 26

<212> DNA

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<220>

<223> Synthetic oligonucleotide probe

<400> 426

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<210> 427

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 427

gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaaagag 49

<210> 428

<211> 21

<212> DNA

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<400> 428  
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<210> 429  
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<220>  
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<400> 429  
gactgccctc cctgc当地 17

<210> 430  
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<400> 430  
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<400> 431  
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<210> 433  
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<400> 433  
ggccacacctcc ttgagtc当地 28

<210> 434  
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<400> 434  
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<210> 435  
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<400> 435  
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<210> 437  
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<400> 437  
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<210> 441  
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<210> 443  
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<400> 443  
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<210> 444  
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<220>  
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<400> 444  
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<210> 445  
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<400> 445  
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<210> 446  
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<400> 446  
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<210> 448  
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<400> 448  
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<210> 449  
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<400> 449  
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<210> 450  
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<400> 450  
tgcgtacgtg tgccttcag 19

<210> 451  
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<210> 452  
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<400> 453  
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<210> 454  
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<400> 455  
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<400> 456  
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<400> 459  
ctcctgtacg gtctgctcac ttat 24

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<210> 462  
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<400> 464  
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<400> 466  
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<210> 467  
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<220>  
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<400> 467  
ctgaggaacc agccatgtct ct 22

<210> 468  
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<400> 468  
gaccagatgc aggtacagga tga 23

<210> 469  
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<400> 469  
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<400> 470  
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<210> 471  
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<400> 471  
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<400> 472  
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<400> 475  
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<400> 478  
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<210> 482  
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<400> 482  
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<210> 483  
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<400> 483  
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<210> 484  
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<400> 484  
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<400> 485  
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<210> 486  
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<400> 486  
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<210> 487  
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<400> 487  
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<210> 488  
<211> 20  
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<400> 488  
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<400> 489  
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<210> 490  
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<212> DNA  
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<220>  
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<400> 490  
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<210> 491  
<211> 17  
<212> DNA  
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<220>  
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<400> 491  
ggggccctga cagtgtt 17

<210> 492  
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<400> 492  
ctgagccgag actggagcat ctacac 26

<210> 493  
<211> 17  
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<400> 493  
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<210> 494  
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cagccgcgc gggagccgga ccgcgcgcgg aggagctcgg acggcatgct 150  
gagccccctc ctttgcgtaa gcccgagtgc ggagaagccc gggcaaacgc 200  
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ccaggtgctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150  
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<212> PRT  
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35 40 45  
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg  
50 55 60  
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser  
65 70 75  
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp  
80 85 90  
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile  
95 100 105  
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys  
110 115 120  
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu  
125 130 135  
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn  
140 145 150  
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser  
155 160 165  
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met  
170 175 180  
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu  
185 190 195  
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His  
200 205 210  
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

215

220

225

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His Asn Glu Ser Thr  
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<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

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gagccctgtc ttactgaacc tggcaacct ggatattctg agacatattt 150  
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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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	20					25							30	
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
		35				40							45	
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			50					55					60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
			65					70					75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
			80					85					90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
			95					100					105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
			110					115					120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
			125					130					135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
			140					145					150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
			155					160					165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
			170					175					180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
			185					190					195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
			200					205					210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
			215					220					225	

<210> 498

<211> 744

<212> DNA  
<213> Homo Sapien

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taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
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Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg  
20 25 30  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val  
35 40 45  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg  
50 55 60  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu  
65 70 75  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala  
80 85 90  
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys  
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro  
 125 130 135  
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe  
 140 145 150  
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln  
 155 160 165  
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln  
 170 175 180  
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His  
 185 190 195  
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser  
 200 205 210  
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro  
 215 220 225  
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro  
 230 235 240  
 Val Asn Lys Ser Lys Thr Thr  
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<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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 tggAACCGAA CGCAATGGAT AAACtGATTG TGCAAGAGAG AAGGAAGAAC 150  
 gaagctttttt ctgtgagcc ctggatctta acacaaatgt gtatatgtgc 200  
 acacAGGGAG CATTCAAGAA TGAATAAAC CAGAGTTAGA CCCGCGGGGG 250  
 ttggtgtgtt ctgacataaa taaataatct taaAGCAGCT GTTCCCTCC 300  
 ccACCCCCAA AAAAAGGAT GATTGGAAAT GAAGAACCGA GGATTCAACAA 350  
 agaaaaaaAGT ATGTTCAATT TTCTCTATAA AGGAGAAAGT GAGCCAAGGA 400  
 gatatttttG GAATGAAAAG TTTGGGCTT TTTAGTAAAGT GTAAAGAAACT 450  
 ggtgtggtgtt tgTTTCCTT TCTTTTGAA TTTCCCACAA GAGGAGAGGA 500  
 aattaataat acatctgcaa agaaattca gagaAGAAAA GTTGACCGCG 550  
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600  
 tttgtgccta tgTTGACTAA aattgaCGGA taattgcagt tggatttttc 650  
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 atgcgttttc tcttggctt aaccacotgg attccatct ggatgttgct 750

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gctggctctt caacttcttgc ttgtggctgg tctggtgcgg gctcagac 950  
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tgactggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaacaa 2850  
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caaaaa 2906

<210> 501  
<211> 640  
<212> PRT  
<213> Homo Sapien

<400> 501  
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Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln  
35 40 45  
Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val  
50 55 60  
Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser  
65 70 75  
Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile  
80 85 90  
Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu  
95 100 105  
Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe  
110 115 120  
Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg  
125 130 135  
Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu  
140 145 150  
Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser  
155 160 165

Tyr Ala Phe Asn Arg Ile Pro Ser Leu Arg Arg Leu Asp Leu Gly  
 170 175 180  
 Glu Leu Lys Arg Leu Ser Tyr Ile Ser Glu Gly Ala Phe Glu Gly  
 185 190 195  
 Leu Ser Asn Leu Arg Tyr Leu Asn Leu Ala Met Cys Asn Leu Arg  
 200 205 210  
 Glu Ile Pro Asn Leu Thr Pro Leu Ile Lys Leu Asp Glu Leu Asp  
 215 220 225  
 Leu Ser Gly Asn His Leu Ser Ala Ile Arg Pro Gly Ser Phe Gln  
 230 235 240  
 Gly Leu Met His Leu Gln Lys Leu Trp Met Ile Gln Ser Gln Ile  
 245 250 255  
 Gln Val Ile Glu Arg Asn Ala Phe Asp Asn Leu Gln Ser Leu Val  
 260 265 270  
 Glu Ile Asn Leu Ala His Asn Asn Leu Thr Leu Leu Pro His Asp  
 275 280 285  
 Leu Phe Thr Pro Leu His His Leu Glu Arg Ile His Leu His His  
 290 295 300  
 Asn Pro Trp Asn Cys Asn Cys Asp Ile Leu Trp Leu Ser Trp Trp  
 305 310 315  
 Ile Lys Asp Met Ala Pro Ser Asn Thr Ala Cys Cys Ala Arg Cys  
 320 325 330  
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 335 340 345  
 Gln Asn Tyr Phe Thr Cys Tyr Ala Pro Val Ile Val Glu Pro Pro  
 350 355 360  
 Ala Asp Leu Asn Val Thr Glu Gly Met Ala Ala Glu Leu Lys Cys  
 365 370 375  
 Arg Ala Ser Thr Ser Leu Thr Ser Val Ser Trp Ile Thr Pro Asn  
 380 385 390  
 Gly Thr Val Met Thr His Gly Ala Tyr Lys Val Arg Ile Ala Val  
 395 400 405  
 Leu Ser Asp Gly Thr Leu Asn Phe Thr Asn Val Thr Val Gln Asp  
 410 415 420  
 Thr Gly Met Tyr Thr Cys Met Val Ser Asn Ser Val Gly Asn Thr  
 425 430 435  
 Thr Ala Ser Ala Thr Leu Asn Val Thr Ala Ala Thr Thr Thr Pro  
 440 445 450  
 Phe Ser Tyr Phe Ser Thr Val Thr Val Glu Thr Met Glu Pro Ser  
 455 460 465  
 Gln Asp Glu Ala Arg Thr Thr Asp Asn Asn Val Gly Pro Thr Pro  
 470 475 480

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
			485					490					495	
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
			500					505					510	
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
			515					520					525	
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
			530					535					540	
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
			545					550					555	
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
			560					565					570	
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
			575					580					585	
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
			590					595					600	
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
			605					610					615	
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
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<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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agcaactgag cgggaaagcg cccgcgtccg gggatcggga tgtccctcct 200
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ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300
caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
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<210> 503  
<211> 373  
<212> PRT  
<213> Homo Sapien

<400> 503

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							20		25			30		
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp
							35		40			45		
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln
							50		55			60		
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu
							65		70			75		
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu
							80		85			90		
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp
							95		100			105		
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val
							110		115			120		
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro
							125		130			135		
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr
							140		145			150		
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr
							155		160			165		
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro
							170		175			180		
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu
							185		190			195		
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala
							200		205			210		
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val
							215		220			225		

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly  
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 Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu  
 245 250 255  
 Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Arg Pro  
 260 265 270  
 Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val  
 275 280 285  
 Lys Pro Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly  
 290 295 300  
 Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln  
 305 310 315  
 Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr  
 320 325 330  
 Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro  
 335 340 345  
 Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro  
 350 355 360  
 Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val  
 365 370

<210> 504  
 <211> 3060  
 <212> DNA  
 <213> Homo Sapien

<400> 504  
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 aatttacgct tagtcccggaa gaccaggacat cgctggacat cgagtggctg 250  
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gtgacactga tagttaaaag atgttttatt atatttcaa taactaccac 1400  
taacaaattt ttaacttttc atatgcatat tctgatatgt ggttttttag 1450  
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<210> 505

<211> 352

<212> PRT

<213> Homo Sapien

<400> 505

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Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu  
20 25 30

Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
35 40 45

Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
50 55 60

Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
65 70 75

Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
80 85 90

Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile  
95 100 105

Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys  
110 115 120

Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

125	130	135
Val Val Leu Val Lys Pro Ser Gly Ala Arg Cys Tyr Val Asp Gly		
140	145	150
Ser Glu Glu Ile Gly Ser Asp Phe Lys Ile Lys Cys Glu Pro Lys		
155	160	165
Glu Gly Ser Leu Pro Leu Gln Tyr Glu Trp Gln Lys Leu Ser Asp		
170	175	180
Ser Gln Lys Met Pro Thr Ser Trp Leu Ala Glu Met Thr Ser Ser		
185	190	195
Val Ile Ser Val Lys Asn Ala Ser Ser Glu Tyr Ser Gly Thr Tyr		
200	205	210
Ser Cys Thr Val Arg Asn Arg Val Gly Ser Asp Gln Cys Leu Leu		
215	220	225
Arg Leu Asn Val Val Pro Pro Ser Asn Lys Ala Gly Leu Ile Ala		
230	235	240
Gly Ala Ile Ile Gly Thr Leu Leu Ala Leu Ala Leu Ile Gly Leu		
245	250	255
Ile Ile Phe Cys Cys Arg Lys Lys Arg Arg Glu Glu Lys Tyr Glu		
260	265	270
Lys Glu Val His His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys		
275	280	285
Ser Arg Thr Ser Thr Ala Arg Ser Tyr Ile Gly Ser Asn His Ser		
290	295	300
Ser Leu Gly Ser Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys		
305	310	315
Thr Gln Tyr Asn Gln Val Pro Ser Glu Asp Phe Glu Arg Thr Pro		
320	325	330
Gln Ser Pro Thr Leu Pro Pro Ala Lys Phe Lys Tyr Pro Tyr Lys		
335	340	345
Thr Asp Gly Ile Thr Val Val		
350		

<210> 506  
<211> 1705  
<212> DNA  
<213> Homo Sapien

<400> 506  
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ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150  
ggacaagaca tgactgttat gagggagctgc tttcgccaat ttaacaccaa 200  
gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

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cccttgcctg gttttaccc tgcttctctg gagccaggta tcaggggcc 400  
agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450  
cagaaaactgt ggaaagcatt ctgggctgtg aaagacacta tgcaagctca 500  
ggataacatc acgagtgccc ggctgctgca gcaggaggta ctgcagaacg 550  
tctcgatgc tgagagctgt taccttgcc acaccctgct ggagttctac 600  
ttgaaaactg tttcaaaaaa ccaccacaat agaacagttg aagtcaggac 650  
tctgaagtca ttcttotactc tggccaacaa ctttgttctc atcgtgtcac 700  
aactgcaacc cagtcagaa aatgagatgt tttccatcag agacagtgca 750  
cacaggcggt ttctgctatt ccggagagca ttcaaacagt tggacgtaga 800  
agcagctctg accaaagccc ttggggaaagt ggacattctt ctgacctgga 850  
tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tccctcccc 900  
tggcactggt ttgttccctg tgcatttca aacagtctcc cttcctatgc 950  
tggtcactgg acacttcacg cccttggcca tgggtcccat tcttggccca 1000  
ggattattgt caaagaagtc attcttaag cagcgcctg gacagtcagg 1050  
gaaggtgcct ctggatgctg tgaagagct acagagaaga ttcttgatt 1100  
tattacaact ctatttaatt aatgtcagta tttcaactga agttctat 1150  
atttgtaga ctgtaagtta catgaaggca gcagaatatt gtgcggcatg 1200  
cttcttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250  
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gggtaaggt gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450  
tgcccagcac aaagcagatc ctcaataaac atttcatttc ccacccacac 1500  
tcgcccagctc accccatcat cccttccct tggtgccctc cttttttttt 1550  
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gctgatggtg acattgcacc tggatgtact atccaatctg tcatgacatt 1650  
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aaaaaa 1705

<210> 507  
<211> 206  
<212> PRT

<213> Homo Sapien

<400> 507

Met Asn Phe Gln Gln Arg Leu Gln Ser Leu Trp Thr Leu Ala Arg	1	5	10	15
Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met	20	25		30
Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln	35	40		45
Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln	50	55		60
Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala	65	70		75
Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg	80	85		90
Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser	95	100		105
Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val	110	115		120
Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys	125	130		135
Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln	140	145		150
Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser	155	160		165
Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu	170	175		180
Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile	185	190		195
Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu	200	205		

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150  
gtttccaaga aatcaaaga gccatccaag ctaaggacac cttcccaaatt 200  
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250  
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacagggtgt 300

tcaaggatca tcaggagcca aaccccaaaa tcttgagaaa aatcagcgc 350  
attgccaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400  
acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450  
tccatgacaa ctatgatca gtcggaggtcc acgctgctgc cattaaatcc 500  
ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550  
aatgttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600  
cacccctgt gcgggttact gtgggagaca gcccacctg aaggggaagg 650  
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tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850  
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<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu	
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Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile	
					20				25						30
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys	
					35				40						45
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu	
					50				55						60
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys	
					65				70						75
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe	
					80				85						90
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser	
					95				100						105
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln	
					110				115						120
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn	
					125				130						135
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His	
					140				145						150
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala	

155

160

165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala  
170 175

<210> 510

<211> 996

<212> DNA

<213> Homo Sapien

<400> 510

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tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200  
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgcctca 250  
ggctctgggt ctgtgccttg tgcaagcgctc gcagcatgag cgtcctcaga 300  
gccttatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350  
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agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450  
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500  
cagaagatac ctctgcatgg atttcagagg caacatttt ggatcacact 550  
atttcgaccc ggagaactgc aggttccaa accagacgct ggaaaacggg 600  
tacgacgtct accactctcc tcagtatcac ttccctggtca gtctggcccg 650  
ggcgaagaga gccttcctgc cagggatgaa cccaccccg tactccagt 700  
tcctgtcccg gaggaacgag atccccctaa ttcacttcaa cacccccata 750  
ccacggcggc acacccggag cgccgaggac gactcggagc gggacccct 800  
gaacgtgctg aagccccggg cccggatgac cccggcccg gcctcctgat 850  
cacaggagct cccgagcgcc gaggacaaca gccccatggc cagtgaccca 900  
tttaggggtgg tcaggggcgg tcgagtgaac acgcacgctg ggggaacggg 950  
cccggaaggc tgccgccccct tcgccaagtt catctagggt cgctgg 996

<210> 511

<211> 251

<212> PRT

<213> Homo Sapien

<400> 511

Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser  
1 5 10 15

Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro  
20 25 30

Leu Leu Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala  
                   35                        40                         45  
 Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His  
                   50                        55                         60  
 Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile  
                   65                        70                         75  
 Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser  
                   80                        85                         90  
 Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser  
                   95                        100                     105  
 His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu  
                   110                      115                     120  
 Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu  
                   125                      130                     135  
 Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn  
                   140                      145                     150  
 Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro  
                   155                      160                     165  
 Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser  
                   170                      175                     180  
 Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro  
                   185                      190                     195  
 Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu  
                   200                      205                     210  
 Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly  
                   215                      220                     225  
 Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly  
                   230                      235                     240  
 Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile  
                   245                      250

<210> 512  
 <211> 2015  
 <212> DNA  
 <213> Homo Sapien

<400> 512  
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 ctgctggagat gttgggggtct ctgggagctc tgcaggcccc agcacccgca 150  
 gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200  
 cttagcaccgg gccacgccc tctggaaact caaacgctga gcgctgagac 250  
 ctcttcttagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350  
acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400  
cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450  
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cagcagctcc accgggaact ccacgcccac gcgcctcaact tccaggtctc 1650  
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ggtgtccttg gactcacctt ggcacatgtt ctgtgttca gtaaagagag 1950  
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gtggcccaaa aaaaa 2015

<210> 513  
<211> 482  
<212> PRT  
<213> Homo Sapien

<400> 513  
Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Cys  
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Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg  
20 25 30  
Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala  
35 40 45  
Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu  
50 55 60  
Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile  
65 70 75  
Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg  
80 85 90  
Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu  
95 100 105  
Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu  
110 115 120  
Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro  
125 130 135  
Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu  
140 145 150  
Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr  
155 160 165  
Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser  
170 175 180  
Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser  
185 190 195  
Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg  
200 205 210  
Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile  
215 220 225  
Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu  
230 235 240  
Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile  
245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	
				260				265				270		
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser
	275					280			285					
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile
	290					295						300		
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr
	305					310						315		
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro
	320					325						330		
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr
	335					340						345		
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
	350					355						360		
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
	365					370						375		
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly
	380					385						390		
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro
	395					400						405		
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr
	410					415						420		
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro
	425					430						435		
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr
	440					445						450		
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met
	455					460						465		
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Gln Thr

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<211> 2284
<212> DNA
<213> Homo Sapien

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ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
gaccaaaaact aaactgaaat ttaaaatgtt ctgcggggaa gaagggagct 250

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tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300  
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350  
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ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450  
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 tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150  
 tggttccaga taaaatcaac tggttatatac aatttctaatt ggatttgctt 2200  
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 <212> PRT  
 <213> Homo Sapien

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 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu  
 35 40 45  
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln  
 50 55 60  
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly  
 65 70 75  
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala  
 80 85 90  
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala  
 95 100 105  
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile  
 110 115 120  
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu  
 125 130 135  
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val  
 140 145 150  
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp  
 155 160 165  
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp  
 170 175 180  
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu  
 185 190 195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser  
 200 205 210  
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala  
 215 220 225  
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala  
 230 235 240  
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr  
 245 250 255  
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro  
 260 265 270  
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr  
 275 280 285  
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr  
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 Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly  
 305 310 315  
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu  
 320 325 330  
 Asn Thr GIy Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn  
 335 340 345  
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg  
 350 355 360  
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn  
 365 370 375  
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu  
 380 385 390  
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly  
 395 400 405  
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 410 415 420  
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile  
 425 430

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 <211> 2749  
 <212> DNA  
 <213> Homo Sapien

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 <221> unsure  
 <222> 1869, 1887  
 <223> unknown base

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gcgggttcga agggacact gtgtccctgc agtgcaccta cagggaaagag 150  
ctgagggacc accggaagta ctggtgcaagg aagggtggga tcctcttctc 200  
tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250  
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<212> PRT  
<213> Homo Sapien

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Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp  
35 40 45  
His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg  
50 55 60  
Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met  
65 70 75

Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
                   80                     85                         90  
 Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
                   95                     100                     105  
 Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
                   110                     115                     120  
 Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
                   125                     130                     135  
 Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
                   140                     145                     150  
 Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
                   155                     160                     165  
 Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
                   170                     175                     180  
 Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
                   185                     190                     195  
 Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro  
                   200                     205                     210  
 Ala Gly Ser Ser Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala  
                   215                     220                     225  
 Glu Asp Thr Ser Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg  
                   230                     235                     240  
 Val Ser Ile Pro Met Val Arg Ile Leu Ala Pro Val Leu Val Leu  
                   245                     250                     255  
 Leu Ser Leu Leu Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His  
                   260                     265                     270  
 Leu Leu Leu Trp Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln  
                   275                     280                     285  
 Arg Asn Glu Lys Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys  
                   290                     295                     300  
 Glu Ala Pro Ser Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro  
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 Pro Leu His Thr Ser Glu Glu Leu Gly Phe Ser Lys Phe Val  
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<210> 525

<211> 25

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<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 527

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<212> DNA

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<223> Synthetic oligonucleotide probe

<400> 527  
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<210> 528

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<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 528

agggaggatt atccttgacc tttgaagacc 30

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<223> Synthetic oligonucleotide probe

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gaagcaagtg cccagctc 18

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<211> 18  
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